TEXTILE BULLETIN

Vol. 58 July 15, 1940 No. 10

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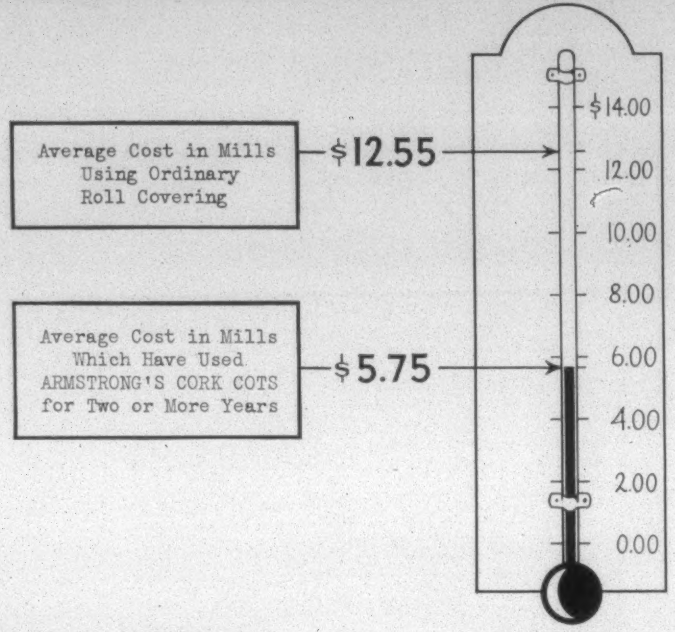
WHY MILLS TURN TO *Cork* FOR ECONOMY

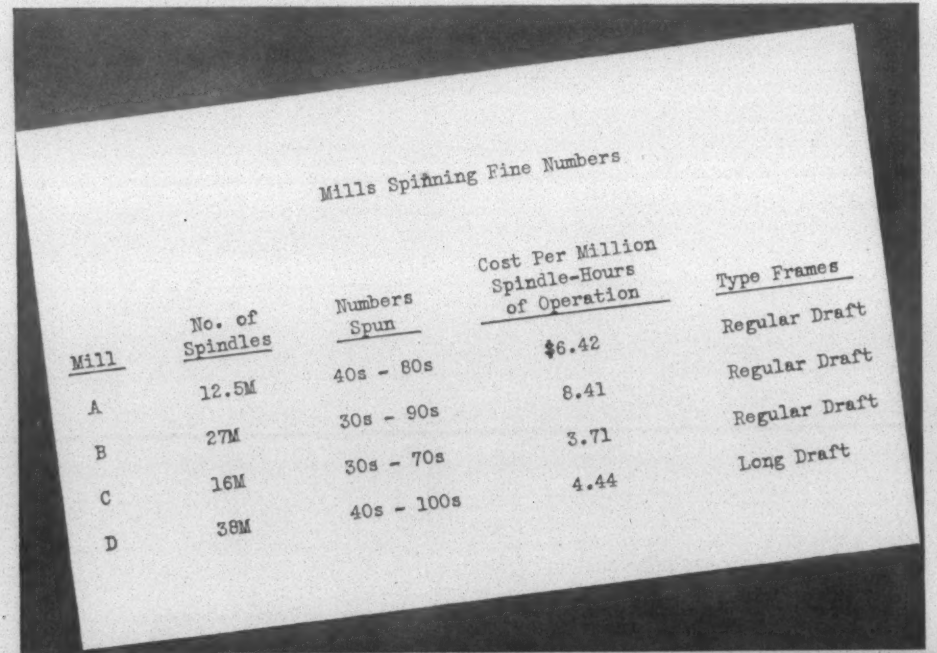
HERE'S PROOF—from Mills Spinning *Fine Numbers*—of the Economy of Armstrong's Cork Cots. (This is Number Two of a series showing savings of mills spinning different ranges of numbers on cork.)



Roll covering cost per million spindle-hours of operation.

AVERAGE SAVING $6.80

And here's a breakdown of actual roll covering costs as reported by representative mills which have been using Armstrong's Seamless Cork Cots for two or more years:



Mills Spinning Fine Numbers

Mill	No. of Spindles	Numbers Spun	Cost Per Million Spindle-Hours of Operation	Type Frames
A	12.5M	40s - 80s	$6.42	Regular Draft
B	27M	30s - 90s	8.41	Regular Draft
C	16M	30s - 70s	3.71	Regular Draft
D	38M	40s - 100s	4.44	Long Draft

THESE figures tell their own convincing economy story about Armstrong's Cork Cots. But, by no means, do these figures tell the *whole* story. Armstrong's Cork Cots save you money in *many* ways.

Their initial cost is no higher than that of ordinary roll coverings, they are quicker and cheaper to assemble, and they wear longer. Furthermore, you can rebuff these cots *three or four times*—at a cost of only about ½¢ per roll! In addition, running costs are reduced and quality is improved when yarn is spun on cork. You get less clearer waste, fewer top roll laps, less end breakage, and less eyebrowing.

An Armstrong representative will be glad to call and show you production figures of mills spinning your range of numbers on cork . . . and he'll show you how much *you* can save by changing over to cork *now*. Armstrong Cork Company, Industrial Division, Textile Products Section, 921 Arch St., Lancaster, Pa.

ARMSTRONG'S *Extra Cushion* SEAMLESS CORK COTS

CORK PRODUCTS SINCE 1860

Published Semi-Monthly by Clark Publishing Company, 218 West Morehead Street, Charlotte, N. C. Subscription $1.50 per year in advance. Entered as second-class mail matter March 2, 1911, at Postoffice, Charlotte, N. C., under Act of Congress, March 2, 1897.

THIS IS NO. 22 OF A SERIES ON

GETTING THE MOST FROM WINDING

Information about winding designed to show improvements
in winding equipment and new ideas in the winding operation

LUBRICATION OF NO. 50 WINDER

In the standard No. 50 head, the spindle bearings at A and the front Cam Shaft Bearing at B are now equipped with Oilite Bushings. These are porous bronze bushings impregnated with a year's supply of lubrication which is fed to the bearing surfaces through the pores. The bushing will last indefinitely if kept permanently saturated with oil.

As added protection for the spindle bearings, an oil reservoir is provided in the top of the frame, carrying a 6-months' supply which should be checked once a month. Oil reaches each bushing by means of a felt wicking, one end passed over the bearing, the other end resting on the bottom of the oil reservoir. The oil is drawn up, by capillary action, through the wicking, and penetrates the porous Oilite Bushing. Only enough oil is required in the reservoir to keep the wick saturated.

The oil level in the reservoir must be kept below the spindle bearing, so an overflow hole is provided in the reservoir. This hole is for overflow *only;* it is not intended to provide lubrication to the Cam and other parts below.

A high grade, light bodied oil having a Saybolt viscosity of 120 to 150 seconds at 100° F is recommended for the oil reservoirs. Socony-Vacuum *Velocite C,* Esso *Teresso 43,* Texas *Regal A,* Gulf *Harmony A* or equivalent are satisfactory oils.

Gear Gain

Mills have a tendency to keep the level of oil in the Gainer Case altogether too high. To prevent oil leaks, the level should be just high enough to cover the teeth and lower rim of the Cam Shaft Gear. This gear will carry the oil up to the groove (C) in the top of the Gainer Case Bushing. This oil lubricates the Cam Shaft and passes along the Shaft to the Cam and front Oilite Bushing (B). Through the centrifugal action of the Cam, the oil is also carried to the Cam Roll, Traverse Bar and Slide.

The supply of lubrication in the Gainer Case should be checked once a week but will last for a long period of time. When starting new cams, a little vaseline or very light grease can be spread on the cam groove.

Belt Gain

Oil is introduced into this Gainer Case through the oil hole at (D), which has a screw cap and leather washer. With the Gainer Belt removed, the case is tipped to the right until the oil hole reaches the "three o'clock position." Filling to this level will bring the oil up to the bottom of the Cam Shaft. This is enough for a long period, but should be checked twice a month.

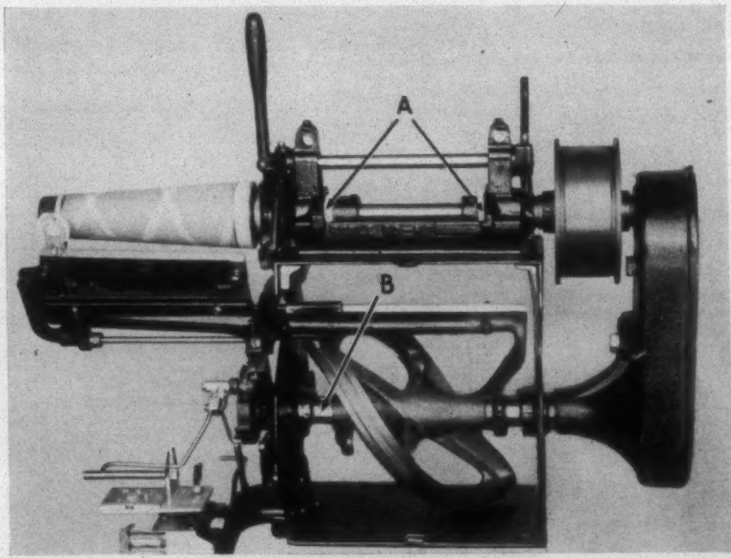
Idler Pulleys

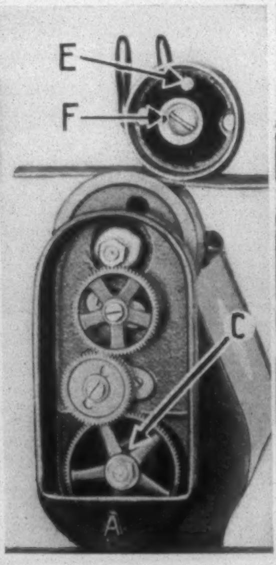
Spindle Idler Pulleys are also equipped with Oilite Bushings. As an added protection, a grease chamber with Alemite Fitting (E) provides the pulley with a reserve supply of lubrication. A charge of light grease is sufficient for 6 months, but it is best to inspect the pulleys more frequently. On each side of the pulley there are two holes leading from the reservoir to the bearing; all except one contain a wick carrying lubrication to the bearing. The fourth hole (F) is open, providing an air vent to release air from the chamber as the grease is being introduced.

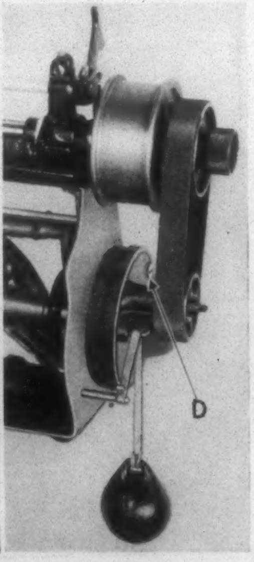
The following greases or their equivalent are satisfactory for Idler Pulleys: Keystone *No. 505,* Socony-Vacuum *MC Medium,* Esso *Castroleum 0½.*

The Idler Pulley Arm has an oil hole that should receive a drop of oil weekly.

On clutch-drive machines, the Idler Pulleys are chamber cored and have oil channels leading from the central oil chamber to the ends of the bearings. By removing the oil cap that holds the pulley in place, oil can be introduced with an oil gun up to the level of these channels. Due to the centrifugal force of the revolving pulley, a chain is required to bring oil to the bearing while the pulley is running. Idler Pulleys should be filled once a month to the bottom hole.







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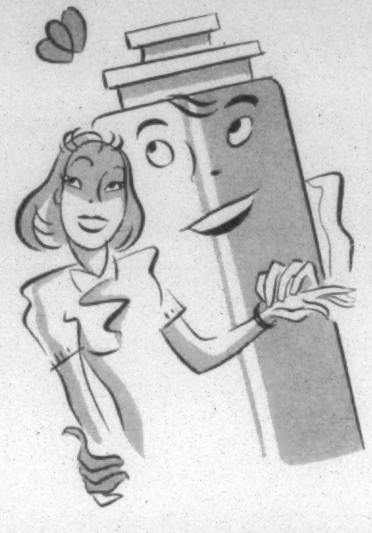

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- No bleeding or crocking
- No mark-off on wet-pressing

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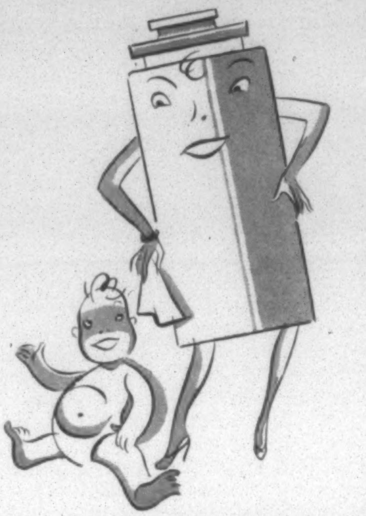

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- Disperses and suspends lime curds formed by soap. Makes rinsing easy.
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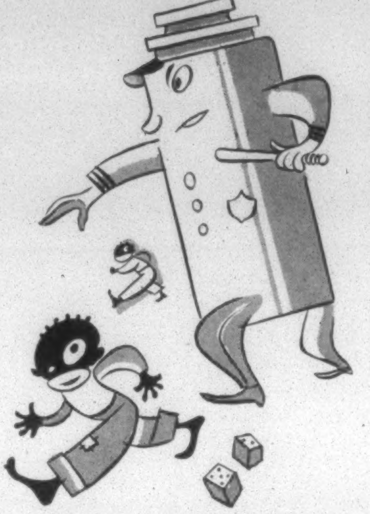
RAMOL D



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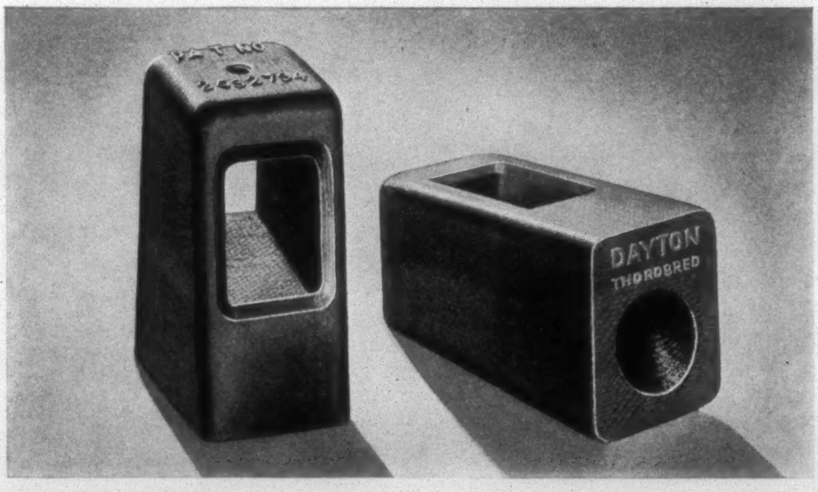
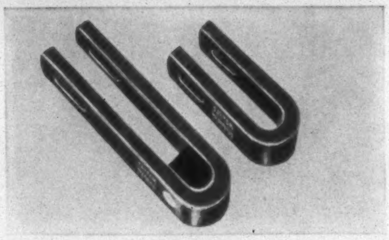


THOROBRED LOOP PICKERS—Special fabrics bonded together with extra strong, resilient rubber give Thorobred Pickers the proper cushion and make them stronger than other pickers of this type. Easy to install—they fit the stick and yet have sufficient reserve stretch to accommodate large and off-size sticks. Molded under controlled heat and pressure, they keep their shape and stay "put" on the stick—assure maximum efficiency and reduce weaving costs.



THOROBRED LUG STRAPS are specifically built with these 5 essential qualities: 1. They have extra strength beyond every requirement. 2. They have sufficient cushion to assure protection to other parts such as cam rollers and picker sticks. 3. They have the desired resilience, plus the ability to absorb shock with immediate comeback. 4. They never require adjustment due to stretching. 5. They have long, trouble-free life. The low first cost of Thorobred Lug Straps assures you greater economy. Their freedom from adjustment and their constant power maintenance assure you increased production and lower operating cost.

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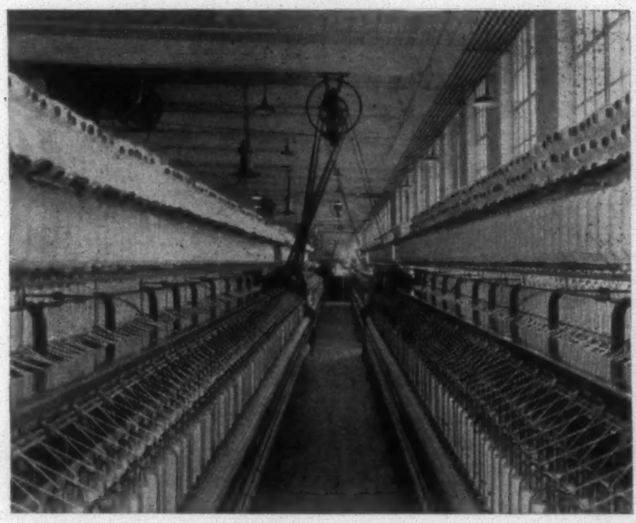
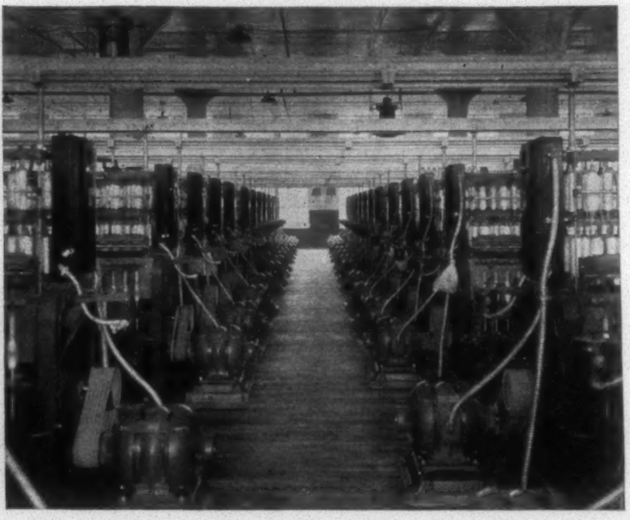
WHEN A LARGE ALABAMA MILL SAID "modernize"

IT ALSO SAID "H & B EQUIPMENT" FOR HIGH-DRAFT ROVING AND SPINNING





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H & B HIGH-DRAFT ROVING SYSTEM, because this simple and efficient mechanism, with its patented Bakelite Scroll Condenser, will produce 3.5 or 4 hank roving from 60 grain sliver in ONE OPERATION and draft up to 30 in many cases; quality equal or superior to that produced on conventional frames.

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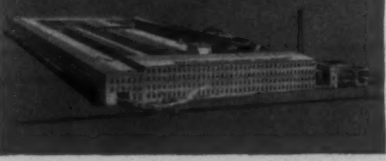

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Whitin

Builds First Domestic Warp-Knitting Machine

Incorporates Electric System Furnished by General Electric

THE first machine of its kind to be designed and built in the United States, this Whitin high-speed, warp-knitting machine incorporates many new features never before offered the knitting trade. For instance, an even quality (stitch) is automatically maintained with only one setting, (despite changes in diameter of warp beam) throughout the entire length of the cloth. *Naturally this saves resetting the machine after every fifty or sixty yards and means a tremendous reduction in waste and seconds.*

The first such machine built in the United States, this Whitin high-speed, warp-knitting machine will knit full-width fabric 168 inches wide. Cloth beam capacity is 12 inches in diameter.

Electrically Speaking

This new warp-knitting machine incorporates a compact and flexible electrical system. Convenient dimensions of the individual motor drive allows mounting the motor inside the frame of the machine where it is out of the way—yet accessible. The speed regulator (which has adequate range for any desired knitting speed) and the starter are grouped (see arrows). Positive and convenient control at any point along the front of the machine is made safe and easy by the shipper rod switch.

General Electric Co.
Schenectady, N. Y.

GENERAL GE ELECTRIC

661-2

TEXTILE BULLETIN

MEMBER AUDIT BUREAU OF CIRCULATIONS

Vol. 58 July 15, 1940 No. 10

A Reconstruction Program for American Enterprise*

By Alfred P. Sloan, Jr.

Chairman General Motors Corp.

THE present may be regarded as a bridge of time between two decades. The decade of the thirties was a period of apprehension and industrial stagnation and retardation. However induced, it was both prolonged and intensified by economic panaceas and political intolerance. Now comes the decade of the forties that might well be a period of renewed opportunity with the resumption of industrial progress unless overshadowed by continued political interference with our essential economic processes. From 1790 until 1930, the industrial progress and living standards of America advanced continuously. The economy was free. The volume of industrial production in each new business cycle exceeded that of the preceding cycle. America was moving ahead.

In recent years private enterprise has been confronted with a number of destructive forces and other deterrents never heretofore experienced. Production of goods and services has fallen considerably since 1929. Although population is greater, yet the production is less, and millions are unemployed. Something has happened. The American industrial system of enterprise and its leadership have been charged with the responsibility for the ills and misfortunes of the economy and their impact upon the people. We shall examine into that question for a moment, but before doing so let us consider another question.

Defense Is Paramount Issue

The paramount issue of the day, and the subject first in the minds of all of us, is resistance to force and aggression, the preservation of our American way of life. To insure this, it is clear that it is of vital concern to us that the standard bearers of democracy emerge victorious in the present struggle. Any other result would be a catastrophe to civilization. Today both national and international morality in respect to human rights is largely passing out of the consciousness of those responsible for their preservation. Hence there is demanded a policy of intelligent and aggressive preparedness in defense of American security and our way of living. Both are essential to us. The instruments of warfare of today are the most highly technical products of industry. We should start with the recognition of that fact and demand that the essential program be directed by those possessing the technical knowledge and experience to assume such a great responsibility unencumbered by the demoralizing influence of the political consideration. There is a job to be done. Let us do it intelligently, not hysterically. Certainly after the past seven years of financial dissipation, we should know that we are no longer in a position to afford any degree of such luxury. National defense should be the keynote of our national policy. National security has become essential to national confidence. Thus our problem becomes two-fold: construction of national defense and reconstruction of economic policies.

Lack of adequate defense is due to lack of foresight. The essential element of statesmanship and national leadership is foresight. Without foresight, real statesmanship can not exist. Perhaps in the days to come we will wonder how we justified the attitude of yesterday in relation to the world situation. The argument might well be advanced that a more realistic attitude on the part of the world's democracies toward the problem of preparedness in the face of the threatening storm might have avoided the catastrophe.

7 Per Cent of World Population, 50 Per Cent of Wealth

American enterprise comprises thrift and skill; in other words, capital and management. Our democratic traditions gave equality of opportunity and equality of responsibility, placed no handicaps upon success, encouraged every individual to seek as high a place in business, the professions, or in politics as his ability would justify and honored him for his accomplishments. That has contributed markedly to the outstanding success of American earns more in purchasing power and enjoys a higher standard of living than any similar group anywhere.

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*Excerpts from address delivered at the recent meeting of the National Industrial Conference Board, New York City.

enterprise. In consequence, our industrial population America, with 7 per cent of the world population, enjoys more than 50 per cent of the world's wealth. That is the result of our system of enterprise. The primary objective of private enterprise must be to produce more and a greater variety of useful things always more effectively, so that they may be sold at always lower prices. Reduced prices mean more may use and enjoy industry's products and more may be employed in the production of an expanding volume. Business is the outstanding activity of any civilization. Society and government exist only through the success of business. Because of this dependence of society upon business, an intelligent and beneficial leadership for the one should imply simultaneously an intelligent and beneficial leadership for the other. Business and government should co-operate on the basis of an intelligent interest in the common welfare and with proper respect for each other. Sad are the facts today.

Industrial Leadership Must Be Practical

Industrial leadership exists in an atmosphere of reality. Therefore, industrial experience should contribute importantly toward a fundamental understanding of the necessities of the community as a whole. Industrial leaders devote their lives to the solution of the problems of the economic world. The impact of those problems reacts on the progress and stability of society. Political leadership involves too often the emotional appeal rather than the logic or facts of realism. Emotionalism has secured an undue influence even in our democracies—dangerous because of its lack of intelligent control. And this power is too often obtained through speeches, gestures and appeals of a propaganda character purposely addressed to this emotionalism and sentimentalism. It is effective only because of a lack of fundamental understanding on the part of the multitude. Industrial leadership involves an entirely different approach to the solution of any problem than political leadership. It is important that the community be made to understand these distinctions in order that it may more intelligently decide where its best interests lie.

I think it is a fair statement that the major current forces now adversely affecting our system of enterprise are not economic or social problems but are rather political in character. Our enterprise system may be regarded as engaged in a life and death struggle. It is under attack both from within as well as from without.

While there may be only a few among us who openly advocate the substitution of some form of state socialism for the American system of enterprise, there are far too many who advocate economic policies that inevitably lead to that result. The alternative to the American form of enterprise is regimentation under bureaucratic or dictatorial control.

Business In Politics

It may not be fitting for industrial leadership to take any political position as such. Business in politics is usually recognized as bad policy but it is of vital consequence that industrial leadership assume a greater and broader responsibility in support of the American system than has been the practice in the past. If we desire to continue to enjoy the manifest fruits of free enterprise we must be willing to work and fight for our convictions. Industrial leadership can and must take an economic position as affecting its ability to contribute to the general welfare. In that area lies the interest of the American system of enterprise and all those who earn their living.

In the past industrial responsibility has been concerned with the production and distribution of an ever *increasing* volume and variety of useful goods and services at *decreasing prices*. But for many years past I have been convinced that industry's responsibilities can not be adequately discharged, with the mere physical production of goods and services. As our national economy becomes more and more involved, the margin of error within which we can operate and maintain economic and social equilibrium, to say nothing of the vital urge for progress, is being constantly narrowed. Hence a much broader responsibility must be assumed. Industrial leadership must seek to develop ways and means to better correlate our industrial mechanism and its component parts with the national economy as a whole, in order to more effectively promote human progress and security and to advance civilization. Inaction means the challenging of free enterprise. Failure means the urge for more and more political interference.

This philosophy is not new. It was laid down over five years ago. I asserted at that time that industrial leadership must evolve into industrial statesmanship. If we are to remain a democracy, if we are to perpetuate free enterprise, it is essential that through the process of mass education, we develop a better and broader understanding of not only the factors involved in our complicated economy, but also the economic consequences of the things that we do or do not do, as influencing the lives and happiness of our people. Much progress has already been made in many directions. But we must move forward on a far wider front, and far more aggressively. That is a most important plank in our platform of reconstruction of our enterprise system.

Possible Loss Of American System Of Enterprise

Looking ahead, and from the standpoint of its broad implications, the present danger to America of becoming involved directly in the present world emergency, is not so much the loss of wealth; it is not only the loss of life, terrible to even contemplate, but it is the very serious possibility, or even probability that with it would go the American system of enterprise. That is a danger. It is a real danger. We must stand continually on guard.

The private enterprise system is based on the profit motive. It must create a profit. It must earn the payroll. In an expanding economy there must be a saving of surplus out of production. And that saving must be risked in the hope of making an adequate profit. Savings thus provide the venture money or equity capital for the expansion of enterprise. Although we speak of a profit economy, it is really a profit and loss economy. It is the hope of profit that provides the urge to assume the risk. Thus the possibility of loss must be reckoned with the opportunity for profit. While a limited number of well managed enterprises earn a profit, over the longer term most enterprises result in loss. And in the aggregate the

(*Continued on Page 40*)

Evaluation of Special Finishes for Textiles

By Ephraim Freedman

Director, Macy's Bureau of Standards

NATURAL textile fibers have done well for man since time immemorial. As man's culture developed, the requirements which his textile fabrics had to satisfy became increasingly difficult.

During the early part of the 19th century it became apparent that a new branch of textile technology would have to be inaugurated. Either it would be necessary for man to create new fibers or he would have to modify his available textile materials so that their use could be extended to satisfy his ever-increasing demands upon them.

In both fields, outstanding successes have been attained. Synthetic materials now vie with textiles made of cotton, wool and silk, while special finishes applied to natural as well as to synthetic textiles expand their usefulness and increase their value to man.

The subject of this paper concerns itself with the evaluation of some of these special textile finishes.

Three Classes of Finishes

Textile finishes may be divided into three major classifications—

1. Those produced mechanically, e.g., preshrinking.
2. Those which alter the chemical nature of the fiber, e.g., cotton mercerization or wool chlorination.
3. Those involving the deposition of substances in or on the fiber or the fabric, e.g., starch, synthetic resins or rubber.

The methods of application to the fiber are dependent upon the nature of the product and the result desired.

The specific purposes for which the special finishes are employed are numerous and varied. Finishes have been developed which made textiles antiseptic and odor-retardant while other finishes reodorize or impart masking odors to them. Some finishes when applied to textiles prevent or lessen the degree of crushing, creasing, shrinking, rotting, water-penetration, or staining. Some finishes make textiles flame proof, or fire-retardant. Finishes are employed to inhibit the tendering action of sunlight, to prevent or retard gas-fading, to produce gloss and to dull fabrics, to produce crinkly and moire effects, to make textiles water-absorbent, to render them more resistant to abrasion, to running, snagging, or scuffing.

I will consider some of these and develop them in more detail but for obvious reasons will purposely refrain from mentioning any of them by brand name.

Antiseptic Finishes

Antiseptic finishes usually consist of germicidal agents absorbed by or deposited on the textile. They may render the textile bacteriocidal or bacteriostatic, i.e., they may kill germs or merely inhibit their growth. Because of their germ-inhibiting properties they retard the decomposition of perspiration and therefore as long as they are present in sufficient amounts, prevent the formation of "body" odors.

Some of these antiseptic finishes are less soluble than others which means that they may not disclose a great germ-inhibiting effect on contacting materials. Nevertheless this particular property prolongs the useful life of the finish because it is not readily leeched out and dissipated.

The evaluation of antiseptic finishes is predicated, therefore upon—

(a) their ability to remain germ free

(b) their destructive action upon germs

(c) the permanence of the finish.

Because germicidal agents are frequently highly toxic or capable of producing skin irritations, or of being absorbed by the skin and producing skin irritation, or of being absorbed by the skin and producing harmful effects, it becomes very important to subject antiseptic finishes to biological tests over a prolonged period of time before proceeding to market them.

Crease and Crush Resistance

The literature contains a number of references to the method for achieving crease-resistance of textiles. Values of crease angles at 65% relative humidity for some of the textile fibers are reported as

Viscose rayon	60°— 65°
Cuprammonium rayon	65°— 70°
Acetate rayon	95°—105°
Silk	120°
Wool	120°
Cotton and linen	75°— 90°

Crush resistance of pile fabrics, particularly velvets, is very important. The ratio of the pressure required to compress the pile (C) and the energy of recovery (R) is

(*Continued on Page 45*)

Piedmont Chemists and Colorists Meet at Myrtle Beach

The Annual Outing of the Piedmont Section of the American Association of Textile Chemists and Colorists was held at the Ocean Forest Hotel, Myrtle Beach, S. C., on June 21st and 22nd, and, as usual, the event was a very definite success.

The outing is devoted entirely to sport and recreation, with no business or executive sessions, and the members and their wives all participate in some of the various forms of amusement offered.

One of the highlights of the outing was the annual golf tournament, in which event W. B. Depass, of Greenville, S. C., won the Arthur Hamm Kicker trophy. Sam Hayes, of Charlotte, N. C., won the prize for fewest putts, with only 27 putts for the 18 holes. Low gross score and prize went to Tommie Larson, of Charlotte, N. C., with an 81.

The women's bridge tournament, under the direction of Mrs. William Depass, of Greenville, S. C., had 20 tables. Mrs. R. E. Depass, Jr., assisted. Mrs. Hugh Cawley, of Charlotte, N. C., was high point scorer for the event.

The formal banquet was given Saturday night at the Ocean Forest Hotel. Prizes were awarded by A. R. Thompson, Jr., vice-president of the National Association of Chemists and Colorists.

It was learned at this meeting that the international convention of the association will be held somewhere in the Piedmont area in the fall. The Piedmont Section of the A. A. T. C. C. is now the second largest in the country, and it is in honor of this rapid growth that the international convention will be held in this section. The convention will draw delegates from all over the United States and parts of Canada.

We are indebted to Jake Ivey, of Mathieson Alkali Works, Charlotte, for snapshots. Unfortunately two rolls of film taken by Mr. Ivey were ruined in developing.

Left photo, H. D. Stedman and I. B. Covington; center, Mrs. Charlie Griffin, Freddie Gerauld, and Mrs. Jake Ivey; right, Tom Church, J. A. Adams, Mrs. Frank Ross, Mrs. H. O. Pierce, Frank Ross, Hill Zahn.

Left photo, Arthur Thompson, vice-president A. A. T. C. C., and party; center, beach scene; right, Mrs. Tom Church, Wm. Harry Entwistle, Mrs. Jake Ivey, Sam Hayes, Mrs. Joe Moore, Dick Sumner, Mrs. Irvin Walker, Irvin Walker.

Cliff Smith Joins Onyx Oil & Chemical Co.

Cliff Smith, who has been engaged in textile chemical and sales work in the South since 1931, has been appointed a Southern representative of the Onyx Oil & Chemical Co., Jersey City, N. J. A graduate of the Georgia School of Technology, Mr. Smith will cover the central Southern States from Greensboro, N. C.

Charles H. Campbell Elected Sonoco Vice-President

Charles H. Campbell, former general sales manager of Sonoco Products Co., of Hartsville, S. C., was elected a director and vice-president in charge of sales at a meeting of the stockholders on June 26th.

Mr. Campbell has been actively engaged in the sales department of Sonoco Products Co. (makers of textile paper carriers), for more than 20 years. He is widely known throughout the textile and paper industries. During his time the activities of the company have expanded greatly, both in number of items in the line and total volume of products sold.

In addition to the general sales offices in Hartsville and the Northern sales office in Mystic, Conn., foreign sales representatives are located in Mexico, Canada, England, Australia and Brazil.

Mr. Campbell has an enviable record of service to his community, serving two terms as Mayor of Hartsville and on various appointments in both city and county affairs.

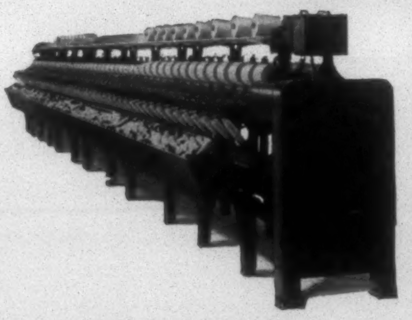
BEST DYEING I'VE SEEN YET, BILL
YOU CAN THANK THE NEW FOSTER WINDERS FOR THAT, BOSS

Foster Model 102 machines are ideal for winding dyeing packages. The drum wind permits uniform yarn speed on every spindle and at all package diameters. Hence uniform density from package to package and from the inside to the outside of each package is facilitated.

Production is also doubled as compared with older type winders and cost is reduced one-third.

Flexibility is another feature. Nine different angles of wind are possible simply by changing four small gears in the head end of the machine. This quick inexpensive change assures perfect winding of ply or single fine or coarse yarn.

Write for Bulletin A-91



FOSTER MACHINE CO.
Westfield, Mass.
Southern Office:
Johnston Bldg., Charlotte, N. C.

FOSTER MODEL **102**

Erecting, Overhauling and Fixing Looms

By Frank D. Herring

Following is the second chapter of a series of articles on loom fixing and loom maintenance by a practical mill man. Accompanied by illustrations of all portions of a loom, this series will go into minute detail explaining the various motions and their settings, timings, repairs, etc.

Part 2

Assembling the Frame Work of the Loom

A LOOM FIXER will seldom, if ever, be called upon to build a loom complete. However, they are sometimes called upon to replace certain parts of the framework; therefore, they should be familiar with this work. The loom builders do most of the essential work on the frame parts in the shops before they are shipped out, and they usually fit perfectly. All the connecting parts of the frame are milled and finished in the shops, and all bolt holes are provided, but bolts alone are not sufficient to properly secure certain parts of the frame, therefore it is necessary to use dowel pins, and sometimes when a replacement, such as loom side or breast beam, is made the dowel pins will not be in place, and it becomes necessary to drill holes for these pins. By all means they should always be put in where needed, because the purpose of the pins is to hold the parts together properly and accurately where it is considered, in fact determined, that the strain is too great for bolts alone.

A rigid, well set up frame, is essential to the proper setting up, maintenance and adjusting of numerous parts throughout the entire loom. It is wise to use heavy lock washers on all bolts holding the frame together. Where the holes are round, and the bolts approximately fit the holes, it is not necessary to use flat washers underneath the lock washers, but all slots, and holes other than round, should have a good heavy flat washer placed underneath the lock washers. After the nuts have been tightened on the bolts it is wise to hit the bolt heads, with a medium heavy hammer, a few blows. Then try tightening the nuts again; invariably it will be found that the nuts can be tightened a round or more after this procedure, which of course will enable them to hold much more securely.

In Figure 1 is shown the complete loom frame, and some parts of the pick motion. One reason for showing this, as all other parts of the loom will be shown, is to acquaint the reader with the loom builders' names of the parts. Indicated by X mark in Figure 1 is a set screw, with check nut, placed in the front pick shaft box. The head end of this set screw rests against the loom side, and will permanently secure the pick shaft box in place. The natural tendency of this pick shaft box is to move forward, and this set screw will positively prevent this. There are thousands of the older model looms now running which were not equipped with this set screw, but they can very easily be put in at the mill in their own machine shop, and by doing, lost motion and excessive wear will be prevented, and a much smoother pick will be the result.

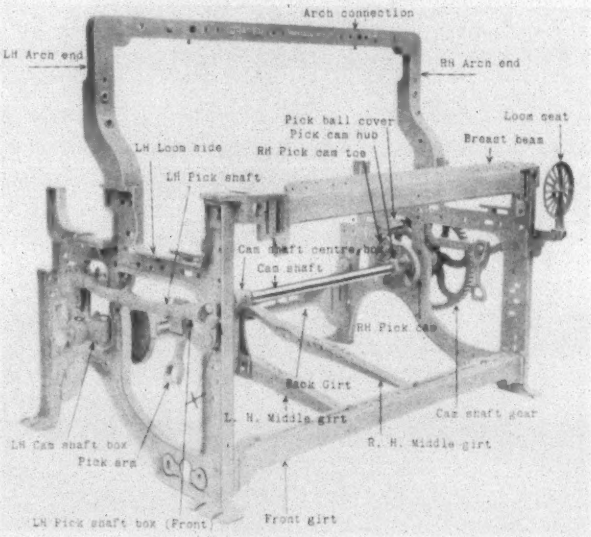
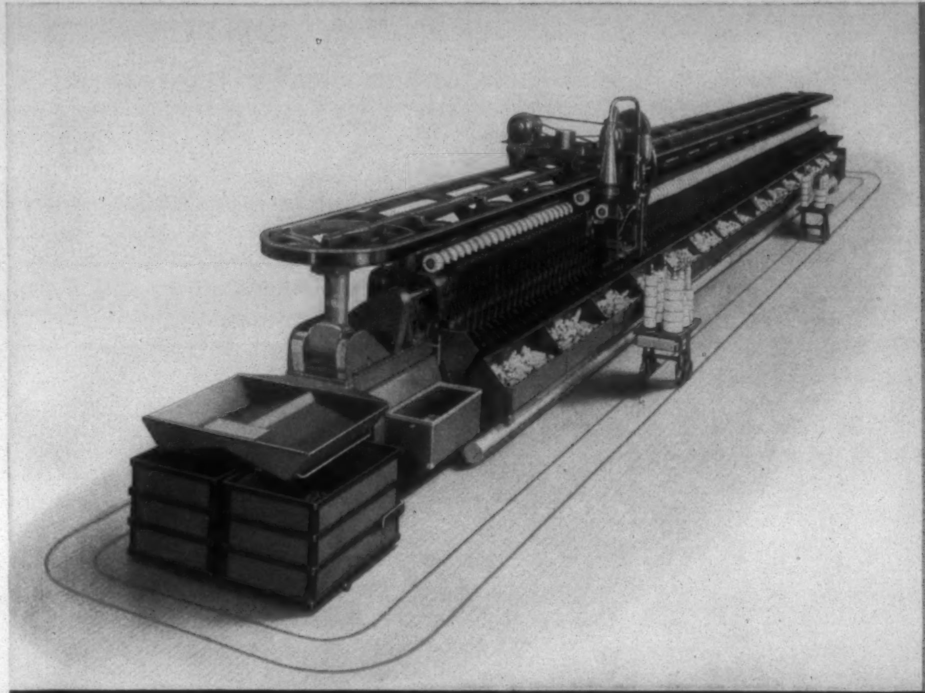


Figure 1

Lining the Cam, Rocker and Crankshafts

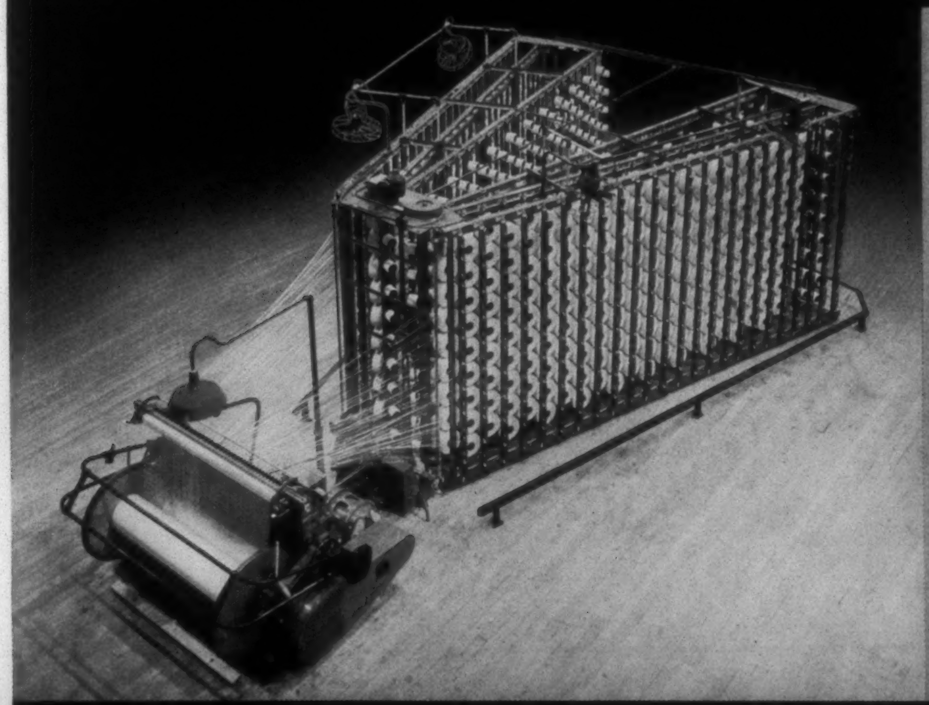
A good loom fixer is a highly skilled mechanic. He should know how to file and fit properly any of the boxes, or bearings, or parts on the loom. Unless he is first given this training, he will forever after be a liability instead of an asset to the company. A great many loom fixers never learn to use a file correctly. A trained fitter can file a part as squarely and accurately as a milling machine will cut it. Filing should be done by arm movement alone, and not allow the body to sway back and forth like a flag pole in a breeze. A trial shaft should always be used in lining and fitting boxes, or bearings for all shafts. A trial shaft is a straight smooth shaft the same size as the shaft, or journal that will rest in the bearing being applied or fitted.



AUTOMATIC SPOOLER

EASILY ADAPTED TO SPUN RAYON

...AS DEMONSTRATED BY
ACTUAL USE IN MANY
LEADING COTTON MILLS NOW RUNNING SPUN RAYON ON THIS EQUIPMENT



SUPER-SPEED WARPER

BARBER-COLMAN COMPANY
ROCKFORD, ILLINOIS, U. S. A.
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A trial shaft should always be used when applying bearings or boxes on the following: cam shaft, crank shaft, rocker shaft, pick shaft, and take-up roll. Any of these jobs can be done more quickly and accurately by proceeding in the following manner: Bolt the bearings in place, but tighten only one of them. Insert the shaft into the tightened bearing and slide it through until the opposite end contacts the loose bearing. This should show at what angle the shaft is pointing, and thereby show how much, if any, the tightened bearing should be filed. Then place the shaft into the loose bearing, tighten it and repeat the above process. It is easy, after a very little practice, for anyone to line a shaft quickly and accurately by the above mentioned procedure. The cam shaft gear should always be a tight driving fit on the cam shaft, and the key in same should be a very tight wedge fit. The crank shaft gear should also be a tight fit on the shaft; it is best to press them on hot when possible.

Setting the Pick Motion

In setting the pick motion, first examine the parallel plug, and if worn excessively replace it with a new one. Tighten the heel bolt securely. Adjust the tension on the parallel spring, and then tighten the parallel spring bolt securely. Adjust the short lug strap by removing all lost motion between the lug strap, the pick arm, and the lug strap connection. Adjust and tighten the pick arm at the desired position, then attach the lug strap holder, or hanger, to the picker stick. The lug strap should incline upwards toward the picker stick and should be set at an angle so that it will be drawn to exactly parallel, or level, position whenever the pick arm is all the way in on the pick. Tighten the pick ball cover and make sure that the cover sets high enough to clear the pick ball on the pick.

Turn the pick cam to position where the pick ball rests on the tip or highest point of the cam toe or point. Adjust the pick shaft up or down to a point where the pick ball will rest squarely on the pick point. Make sure there is no lost motion, lengthwise, in the pick shaft.

With the pick ball still resting on the highest point of the cam toe, adjust the long lug strap to give the desired throw or stroke on the picker stick. Then turn the crank shaft to exactly top center position, and with the picker stick all the way back against the end of the lay, move the pick cam, which of course should be loose on the shaft, forward until all the play is drawn out of the lug strap, between the lug and the picker stick, and then tighten the pick cam securely to the cam shaft.

Comments On the Pick Motion

The proper setting and care of the pick motion is vitally important to the proper operation of the loom. The pick motion is subjected to constant and terrific strain while the loom is running, and unless the parts of the pick motion are kept properly adjusted, thoroughly tightened, and sufficiently lubricated this will be a constant source of trouble.

The parallel plug is an important part of the pick motion. If it is excessively worn the power on the pick is weakened. If it is worn one-sided, as will frequently happen, it will prevent straight throwing of the shuttle. The loom builders have in recent years developed a roller, which is attached to the parallel, to replace the parallel plug. It works very satisfactorily and is much more economical in the long run.

The parallel spring should be adjusted just tight enough to draw the picker stick back smoothly, and to prevent the rising up, out of position, of the parallel on the pick. Too tight a tension on the parallel spring will draw the picker stick back with too much force, after the pick, and thereby draw the check strap back and render it useless in so far as checking the stick or shuttle is concerned.

There should never be any lost motion between the short lug strap and the lug connection. Lost motion at this place will cause excessive wear on the short leg, and also on the end of the lug strap connection. It will also cause the shuttle to be thrown improperly.

The correct adjustment for the pick arm is dependent on the shape, or design, of the pick point, or toe. Under ordinary conditions the pick arm should be adjusted and the bolt tightened about halfway of the adjusting slot in the arm. The lug strap hanger, or holder, should be attached to the picker stick at a position to allow the lug strap to incline upward toward the stick when the stick is back in position at the end of the lay. This setting will allow the lug strap to be drawn into approximately level, or parallel, position on the pick. If the lug is too high on the stick, in relation to the pick arm, it will cause too much downward pull on the lug hanger, thereby pulling the hanger loose from the stick by breaking the hanger screw, or hanger itself. The same thing will happen if the lug hanger is attached too low on the stick, due to the upward pull on the hanger, and in addition this upward pull will raise the parallel out of position on the pick, thereby throwing the picker out of parallel with the shuttle point, or spur. Also, if the hanger is attached too low it will cause a heavy or harsh pick, which is very undersirable for several reasons.

A heavy pick, or too much power on the pick, will cause undue strain and excessive wear and breakage on numerous parts throughout the entire loom. The pick ball cover is a source of considerable trouble for the loom fixer. They frequently come loose, or are broken while running, and this is usually caused by the pick ball striking the cover on the pick. This can be avoided by filing the cover to incline it upward away from the pick ball, thereby allowing ample clearance for the ball, even though it might be worn slightly. Of course, a new pick ball will usually stop the breakage of the covers, but a good loom fixer is one who can do some things to prolong the life of some parts, even though they are slightly worn.

Different model looms require different length stroke on the picker sticks for efficient operation. Also sometimes the weaving of different fabrics on the same model loom will make it necessary to use more, or less, stroke or power on the pick. Therefore, the proper stroke on the stick will have to be determined to suit the local conditions or requirements. The stroke on the stick should be determined, and the lug adjusted and securely tightened, before the pick cam is timed and set in running position. Otherwise the setting of the pick cam will be purely

(*Continued on Page 38*)

B. D. Heath Will Represent The Texas Co.

B. D. Heath, of Charlotte, has been appointed special representative of The Texas Co. in North Carolina, it was announced by company officials last week.

Mr. Heath will specialize in Texaco lubricants for the textile industries, including "Spindura" oil for spindles, "Starfak" grease for anti-friction bearings, "Stazon" for looms, and also needle oils and other lubricants for knitting equipment. He will continue to make his headquarters in Charlotte.

Mr. Heath has long been identified with the Southern textile industry and for the past few years has devoted most of his efforts to textile lubrication. He is widely known to both cotton and knit goods manufacturers in this section.

Celotex Assigns D. J. Carmouche To Southeastern Territory

The Celotex Corp., of Chicago, Ill., has placed Donald J. Carmouche in charge of textile sales and research in the Southeastern States, according to announcement made by the company. Headquarters will be maintained in Charlotte and Mr. Carmouche has already arrived in this city to assume his new duties.

Mr. Carmouche, who is a native of New Orleans, entered the employ of The Celotex Corp. in 1925 as district salesman in the States of Mississippi and Arkansas, and as reward for an unusual sales record, was later made sales supervisor and in 1929 was promoted to the position of assistant manager of the industrial uses department. Immediately prior to his present assignment he served as manager of the rock wool department.

Part of Mr. Carmouche's activities will be devoted to finding new uses for his company's products in the cotton manufacturing and knitting industries in the Southeast. These products include a new type vapor-sealed air channel roof insulation, specially designed for areas over which high humidities prevail; water-proof mill flooring; resilient, long-wearing floor surfacing for textile mills; and the rigid type of insulation, of which Celotex is said to be the largest manufacturer in the world.

For Better Bleaching

DESIZE with EXSIZE

The *natural* action of the enzymes in Exsize removes starches thoroughly and economically. It's the best way to prepare fabrics for bleaching, dyeing, and sanforizing—at nominal cost.

Our laboratory facilities and practical field men are available to help you with desizing problems.

PABST SALES COMPANY,
CHICAGO, ILL.

Warehouses at New York, and Textile Warehouse Co.,
Greenville, S. C.

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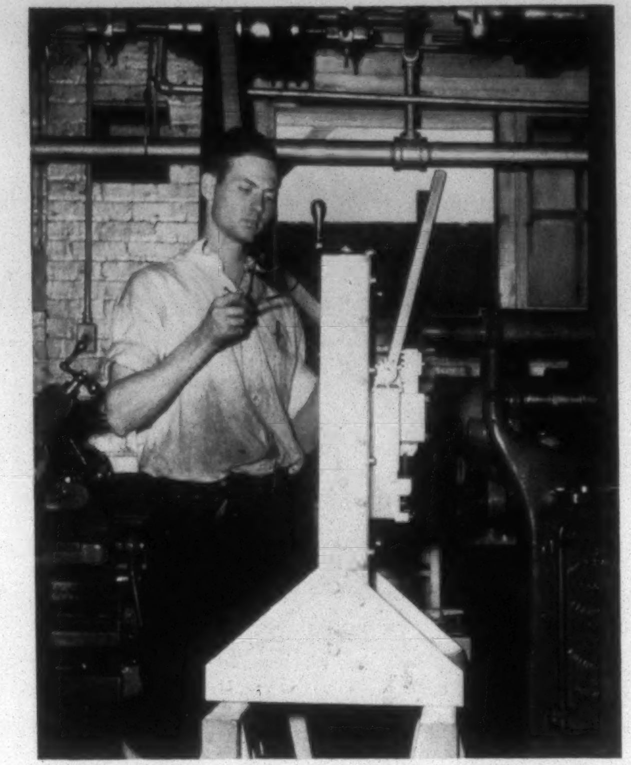
APPRENTICE TRAINING

at

The Terrell Machine Co.



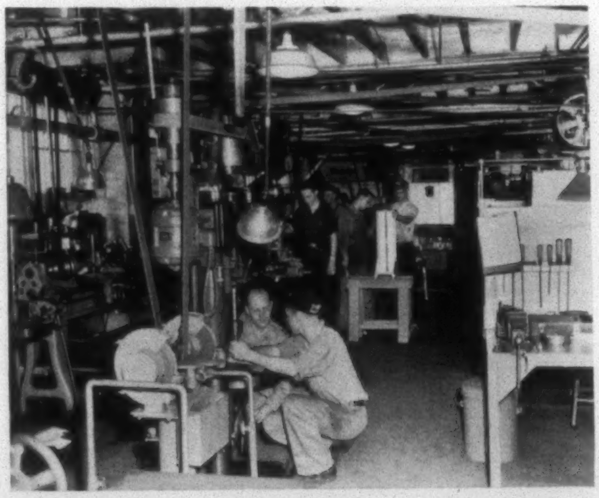
MORE than three months ago The Terrell Machine Co., of Charlotte, N. C., began the systematic training of apprentice machinists. A small but well-equipped shop was set apart for this special purpose. It is under the supervision of a foreman who is not only a skilled mechanic but who also has had experience in instructing others in the use of hand and machine tools.

In addition, the course includes classes in sketching and blue-print reading, shop mathematics, mechanism, the operation of machine tools, and English. These subjects are taught by correspondence and are supplemented by company engineers who are experienced in both the practice and theory of machine design.

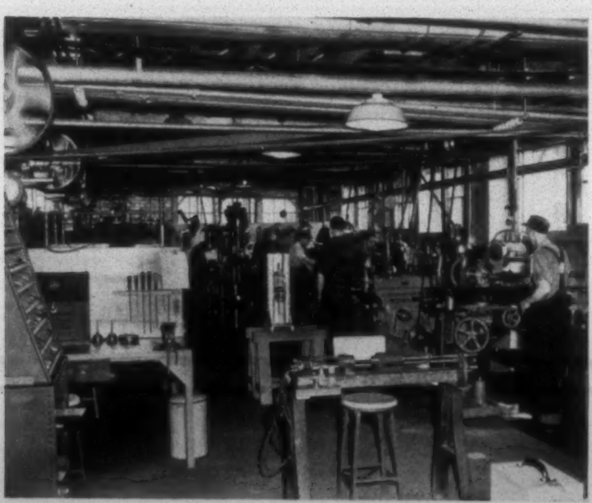
The shop is now being operated forty-two hours a week. The apprentices are paid for full time although three hours a week are devoted to study and this probably will be increased to four hours in the near future.

The first three months constitute a trial period to determine the aptitude and willingness of each apprentice. Casualties have been few, only two apprentices from the first lot of eight having failed to make the grade.

The requirements for admission are four years of high school or its equivalent, ability to pass the required physical examination, acceptance of the applicant after interview by the Apprentice Committee, satisfactory refer-



Two general views of Apprentice Shop. The third picture shows one of the apprentices at his work bench. Each apprentice has his own individual bench and tools.

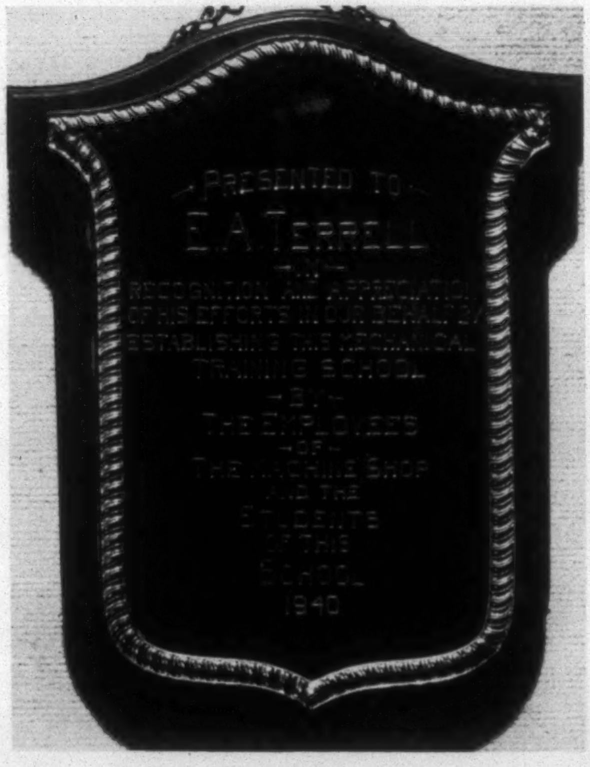


ences as to character and willingness to work, and a maximum age limit of twenty-one years.

The number of apprentices is necessarily limited by the small size of the shop. At present the company has applications on file for more than three times the number which can be accommodated, although no particular publicity was given to the inauguration of the plan.

The apprentices will be graded on their work in all subjects and, at the end of each period of six months, will have their wage rates adjusted according to individual progress.

An adequate reference library has been provided, with the latest authoritative works on metal working methods and machines and allied subjects. These are supplemented by trade magazines, catalogs and reference charts.

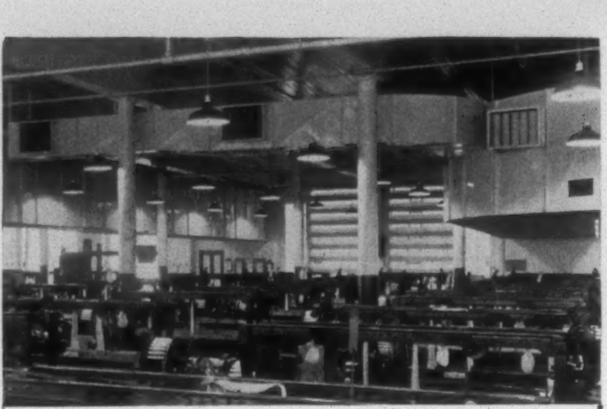


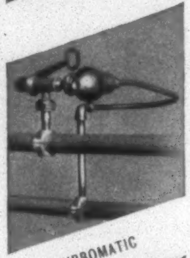
The handsome bronze plaque presented to Mr. Terrell by the apprentices.

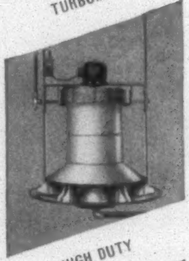
The company is well pleased with results already secured. It is in the midst of a comprehensive program of development of new machines, more than fifty having been designed during the past three years, and believes this training program will provide it with the skilled men it needs for its future growth.

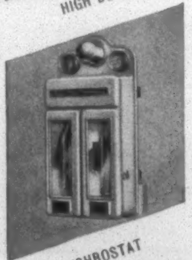
The apprentice shop is in charge of Good Richards, who was born in the United States but reared in England, where he was given a long training as a machine tool and die maker. He also served as machinist in the British navy.

E. A. Terrell, president of the Terrell Machine Co., conceived the idea of the shop for apprentice machinists and takes great interest in the development of the young men who are taking advantage of the opportunity to become skilled machinists.









Thirsty Air . . . Tons of It

Your textile mill is an incurable sot. Every manufacturing operation creates thirst in the room air.

To satisfy this continuous and almost unquenchable thirst, many a mill has use for tons of humidified air—every hour. (Know of one that uses nearly 500 tons of saturated air every hour in one department only.)

Several ways there are to make and introduce this humidified air. What is the right way—or the best way—or the most economical way?

Because we make a complete line of humidifying (and Air Conditioning) devices, we are the better able to make unbiased recommendations.

Air Conditioning is bought as an investment—as a useful manufacturing accessory. Only with the right devices coupled with experience to guide right application can you get everything such an investment can bring.

Parks-Cramer Company

Certified Climate

Fitchburg, Mass Boston, Mass. Charlotte, N. C.

Personal News

W. M. Aspenwall is now superintendent of the Bladenboro (N. C.) Cotton Mills.

O. O. Canova is now superintendent of A. Schottland, Inc., Rocky Mount, N. C.

J. M. Proctor has succeeded J. B. Owen as treasurer of the Harriett Cotton Mills, Henderson, N. C.

E. J. Boswell is now superintendent of the Belton Mills, Belton, S. C.

W. C. Neely has succeeded W. C. Oxley as secretary of the Clinton (S. C.) Cotton Mills.

S. P. Jenkins is now superintendent of the Payne Mill of Bibb Mfg. Co., Macon, Ga.

Donald McMahon is now superintendent of the Peerless Woolen Mills, Rossville, Ga.

O. F. Bell, of Atlanta, Ga., has purchased the Glencoe Cotton Mills, Columbia, S. C., at bankruptcy sale.

W. A. Kieke has succeeded C. B. Gunn as superintendent of Jefferson Mills No. 3, Royston, Ga.

D. H. Morris, 3d, has succeeded C. E. Davis as superintendent of the Bama Cotton Mills, Enterprise, Ala.

Stanley Black has resigned as manager of the Gayle Plant of the Springs Cotton Mills, Chester, S. C.

Ralph Davis has succeeded J. E. Bostick as superintendent of the Alabama Mills, Russellville, Ala.

Homer Roberts has succeeded W. G. Stainton as superintendent of the Alabama Mills, Wetumpka, Ala.

Chas. Y. Hall has succeeded J. D. Head as superintendent of the Caroline Mills, Carrollton, Ga.

Ernest Korten, Sr., has succeeded J. H. Cook as superintendent Seaboard Silk Mills, Elberton, Ga.

E. O. Defore has succeeded C. J. White, Jr., as chief engineer of the Callaway Mills, LaGrange, Ga.

J. L. King has succeeded Homer King as superintendent of the Alabama Mills, Clanton, Ala.

H. S. Price has succeeded W. E. Williams as superintendent of the Alabama Mills, Dadeville, Ala.

P. S. Bailey, vice-president of the Clinton Cotton Mills, has been re-elected mayor of Clinton, S. C., for a fourth term, defeating his opponent by a vote of about two and one-half to one.

E. H. Younts has succeeded Robt. B. Scott as secretary and treasurer of the Scottdale Mills, Scottdale, Ga.

J. Wilson McArver is now superintendent of Glen Raven Cotton Mills No. 2, Kinston, N. C.

David J. Craig, Jr., of Charlotte, N. C., has been appointed receiver of the McIntyre Mfg. Co., Maiden, N. C.

Julian T. Baker has succeeded Lynn Williamson as treasurer of the Virginia Mills, Swepsonville, N. C.

E. W. Metzger has succeeded W. F. Fleming as superintendent of the Darlington (S. C.) Mfg. Co.

A. A. Hobbs is now treasurer and manager of the Anniston Yarn Mills, Anniston, Ala.

F. W. Brunkin has succeeded J. N. Townsend as secretary and treasurer of the Dallas (Tex.) Cotton Mills.

A. L. Morrow has succeeded Claude P. Pipes as superintendent of the Houston Textile Co., Houston, Tex.

Daniel Belmonte is now superintendent of the Dixie Finishing Co., Emporia, Va.

S. F. Dribben has succeeded Julius W. Cone as vice-president of the Proximity Mfg. Co., Greensboro, N. C.

G. P. Peeler has succeeded B. T. Bumgardner as superintendent of Phenix Mills No. 2, Kings Mountain, N. C.

Mrs. Ina S. Royall has succeeded Mrs. Minnie S. Ewing as president of the Smitherman Cotton Mills, Troy, N. C.

Geo. W. Carte has been promoted from superintendent to general manager and vice-president of the North Carolina Fabrics Corp., Yadkin, N. C.

Reid Tull, a textile graduate of N. C. State College, has been promoted to superintendent of the N. C. Fabrics Corp., Yadkin, N. C.

Geo. W. Robertson, Jr., has been promoted from superintendent to general manager and vice-president of the North Carolina Finishing Co., Yadkin, N. C.

C. H. Patrick, formerly of the Union Bleachery, Greenville, S. C., is now superintendent of the N. C. Finishing Co., Yadkin, N. C.

Harvey W. Moore, secretary and treasurer of the Brown Mfg. Co., Concord, N. C., has succeeded W. W. Flowe as secretary and treasurer of the Roberta Mfg. Co., and the White Park Mills, both of Concord.

Old Dominion maintains an art department and a creative staff for developing both individual and coordinated package designs. This service is yours without obligation.

Where a manufacturer has a line of products, coordinated packaging plays a vital part in his sales.

The identification that exists in "family units" increases brand recognition.

Through coordinated packaging the effect of advertising is carried over from advertised to non-advertised items.

Old Dominion Box Co., Inc.
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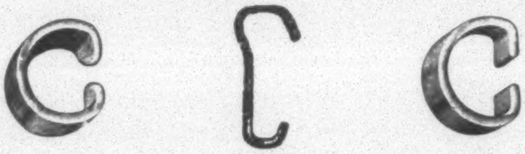

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Fall River, Worcester, Philadelphia

6 REPAIR SHOPS
Fall River, Philadelphia, Charlotte, Greenville, Atlanta, Dallas

7 DISTRIBUTING POINTS
Fall River, Worcester, Philadelphia, Charlotte, Greenville, Atlanta, Dallas

Southwestern Representative: Textile Supply Co., Dallas, Texas
★PRODUCTS AND SERVICES: Card Clothing for Cotton, Wool, Worsted, Silk and Asbestos Cards and for All Types of Napping Machinery • Brusher Clothing and Card Clothing for Special Purposes • Lickerin Wire and Garnet Wire • Sole Distributors for Platt's Metallic Wire • Lickerins and Top Flats Reclothed

J. C. McMurray has succeeded John E. Garner as president of the Springfield (Tenn.) Woolen Mills.

W. N. Scroggins has succeeded R. W. Hollis as superintendent of the Alabama Mills, Aliceville, Ala.

E. H. Bucheit has become treasurer, and Columbus Moise, secretary, of the Saratoga-Victory Mills, Albertville, and Guntersville, Ala.

F. O. Tyler is now president and treasurer of the Anniston Mfg. Co. Co., Anniston, Ala. W. B. Pennington is secretary of the Anniston (Ala.) Mfg. Co.

R. C. Moyer has become manager, L. H. Roberts, assistant manager, and Ralph N. Mallard, superintendent, of the Linen Thread Co., Blue Mountain, Ala.

F. G. Bemis, of Boston, Mass., has succeeded G. N. Roberts as president of the Bemis Bag Co. mills at Bemiston, Ala., and Bemis, Tenn.

P. E. Findlay, Jr., has been transferred from superintendent of the Payne Mill of the Bibb Mfg. Co., Macon, Ga., to a similar position at Mill No. 1.

W. H. Spencer, Jr., has resigned as overseer of weaving at the Whitney (S. C.) Mfg. Co. to accept a similar position with the Spartan Mills, Spartanburg, S. C.

W. F. Crowder, formerly overseer of spinning at Chadwick-Hoskins Co., Plant No. 3, Charlotte, N. C., is now overseer of spinning at the Martinsville (Va.) Cotton Mill Co., another of the Gossett Mills.

Fred M. Shehane has resigned as general overseer of weaving on Draper looms at the Stonecutter Mills, Spindale, N. C., to accept a similar position at the Judson Mills, Greenville, S. C.

R. Wright Cannon, secretary of the Newberry Cotton Mills, Newberry, S. C., is the author of an article entitled "I Will Not Let Him Down," in the July issue of *Scouting*, national publication for leaders in the Boy Scouts of America.

Harvey W. Moore, of Charlotte, N. C., has been named secretary and treasurer of the White-Parks Mill Co. and acting secretary and treasurer of the Roberta Mfg. Co., both of Concord, N. C. This is in addition to his other textile interests and duties.

OBITUARY

STUART W. CRAMER

Charlotte, N. C.—Stuart Warren Cramer, 72, for many years one of the leading textile manufacturers of the South, died at his home July 1st. He had been seriously ill of heart trouble since last October.

At his death, Mr. Cramer was chairman of the board of directors of the Cramerton Mills, Inc., which he served as president until he turned this office over to his son, Maj. Stuart W. Cramer, Jr., a little over a year ago.

Mr. Cramer was born in Thomasville on March 31, 1868, the son of John Thomas and Mary Jane Cramer. He was graduated from the United States Naval Academy in 1888 and studied in the School of Mines at Columbia University the following year. He then returned to his native State, where his brilliant career in the field of textiles began.

For the years from 1889 to 1893 he was assayer in charge of the United States Assay Office here and then for the next two years he was associated with the D. A. Tompkins Co. of this city as engineer and manager. In these two years and the 23 years from 1895 to 1918, Mr. Cramer was engaged in mill architecture and engineering and is credited with having planned or equipped probably one-third of all the cotton mills in the South.

At Cramerton, he developed a mill and mill village which have for years been pointed to as among the best of the industry. Something of the thought which he put into operation of his business and the problem of the welfare of his employees is revealed in the fact that during the days of the depression when mills were running on greatly curtailed time and thousands of workers in the industry were out of employment, arrangements were made in Cramerton to divide the work so that each family would be able to earn its needs and not one family was forced to call upon the government for relief.

In the textile industry, Mr. Cramer held many honors. He had served as president of the American Cotton Manufacturers' Association in 1916-17, as president of the National Council of American Cotton Manufacturers in 1917-18 and from 1920 to 1927. He was medalist for the National Association of Cotton Manufacturers in 1913. Another honor was the vice-presidency of the Cotton-Textile Institute, Inc. Added to these was the important office of treasurer and director of the Textile Foundation, an organization set up to further the cause of textile research. During the days of the National Recovery Administration, he served as a member of the Cotton-Textile Code Authority.

Although he had a busy life in his industrial connections, Mr. Cramer found time for numerous other activities. For instance, he was granted more than 60 United States and foreign patents as the result of his research studies and practical experience in trade chemistry, physics, and with his machinery. In this line, he was noted for the Cramer system of air conditioning, which includes the automatic regulation of humidity and temperature used by so many of the nation's large textile plants. He also devised the four-frame system of electric driving and numerous novelties in cotton mill design.

In the World War, he served in Washington as a member of the production engineering committee of the Council of National Defense, the war service committee of the American textile industry, and also as a member of the advisory tax board of the Treasury Department.

His interest in the United States Navy never lagged and he became the organizer and first commander of the North Carolina Naval Reserve in 1890. He was a member of the board of visitors of the United States Naval Academy from 1912 to 1926, was a life member of the United States Naval Institute, and for years served as chairman of observance of Navy Day in North Carolina.

He was always keenly interested in politics and was one of the leading members of the Republican party in the State. He was a delegate to the Republican National Convention in 1928 and in 1932 and was a member of the committee which notified Herbert Hooxer of his nomination for the Presidency. Other offices he held with the party included Presidential elector at large, chairman of the finance committee of the State Executive Committee and State campaign manager. He was a member of the President's Organization on Unempoyment Relief in 1931 and of the President's Conference on Home Building and Home Ownership in that same year.

He is survived by Mrs. Cramer, the former Miss Rebecca Warren Tinkham, of Boston, three children, Maj. Stuart W. Cramer, Jr., and George Cramer, of Charlotte, and Mrs. James R. Angell, of New Haven, Conn.

ARCHIBALD McDOWELL, SR.

Scotland Neck, N. C.—Archibald McDowell, Sr., 78, widely known textile executive and banker, died at his home here recently. He had been in ill health several years.

Mr. McDowell organized the Scotland Neck Cotton Mills and served as secretary and treasurer. Later he was named president of the company.

Surviving are one son, Archibald, Jr., and three daughters, Mrs. Archie Brown, of Rick Square; Mrs. D. S. Seyfert, of Pittsburgh, Pa., and Mrs. James Riddick.

L. N. CHANDLER

Greenville, S. C.—L. N. Chandler, 56, superintendent of carding and spinning for Mills Mill and well known in textile circles throughout this section, died recently following only a few days of illness.

Mr. Chandler, a resident of Greenville for 20 years, was born and reared in Commerce, Ga.

He was a member of Emmanuel Baptist Church and was also a member of the Masonic fraternity. He was chairman of the board of deacons of his church, superintendent of the Sunday School, treasurer of the church, and actively identified with all other phases of the work there. In all matters pertaining to the community's advancement and uplift, Mr. Chandler took an active interest.

GEO. L. HARDWICK, SR.

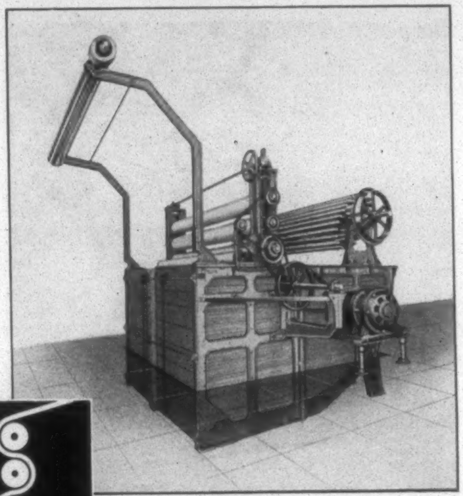
Cleveland, Tenn.—George L. Hardwick, Sr., 78, outstanding Tennessee industrialist and president of the Hardwick Woolen Mills, died July 12th at his home following an illness of more than a year.

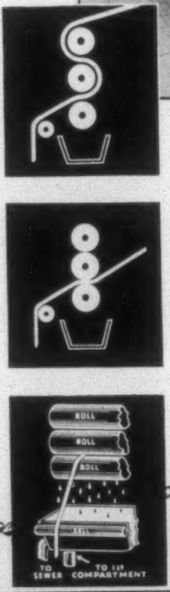
Mr. Hardwick had directed the operations of the Hardwick Woolen Mills, one of the largest and oldest of Cleveland's manufacturing plants, for more than 40 years, he was a past president of Centenary College, a member of the Methodist Church and a thirty-third degree Mason.

Surviving are three sons, George L. Hardwick, Jr., vice-president of the aHrdwick Mills; Frank, secretary-treasurer of the mills; and Cicero Hardwick; four daughters and a sister.

The Fleet Line

rope soaper and bleacher





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Construction may be heart stock cypress or all stainless steel with any type of reel or any other arrangement of rolls desired.

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TEXTILE BULLETIN

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Textile Research

There are two distinct types of textile research, one being research leading to improvement in textile manufacturing and the other to the development of new products and new uses for textiles.

We have been especially interested in the first type and have always regretted that so little of real value has been done with the large fund which came from the sale of German dyestuffs during the World War and which was placed in the hands of the Textile Foundation for purposes of research.

We have always believed that the textile industry and the people of the United States would have benefited to a far greater extent if a portion of the Textile Foundation funds had been devoted to practical research.

There are, in the cotton mills of the South, hundreds of men who would gladly devote their time to practical tests and observations, if they could be given expert direction in the methods to be used and in the keeping of records.

If the Textile Foundation would pay the salary and traveling expenses of one experienced man, who could go from mill to mill and supervise the starting of tests and later check their progress, great improvement in textile processes would result with much financial benefit to the industry.

The other form of textile research, that relating to developing new products and finding new uses, is equally important and is the form which is now being sponsored by the American Cotton Manufacturers' Association and the Cotton-Textile Institute.

This effort should have the support and financial backing of all cotton textile manufacturers because there is great need for extending the use of cotton goods.

We are hoping that the Textile Foundation will see its way clear to give aid to practical cotton textile research, so that two worthwhile movements may go forward at the same time.

Control of Naval Power

America heard with regret of the naval battle at Oran, in the Mediterranean Sea, in which the British Navy was forced to destroy warships belonging to their former ally, but realized that it was an act of self defense.

Had Germany been able to add the French fleet to that of Italy and Germany, the combined power would have very nearly equalled the fleet of Great Britain and it would have made protection for the British Isles very difficult.

We commend the action of the British at Oran and Alexandria, but are wondering what we should or will do, when and if, a similar situation confronts us.

We are optimistic for the British Isles, probably because we wish them to succeed in fighting off the coming air attacks by Germany, but everyone realizes that England is in a tight spot and that for them to be able to completely defeat Germany will be almost a miracle.

We are thinking of that day, which we hope will not come but is entirely possible, when the British Isles can stand no more bombing and must sue for peace, knowing that Germany will dictate the terms.

One of the terms will be the surrender of the British Navy and the portion of the French Navy acquired by the British and to refuse to surrender the navy will mean more bombing, more destruction and severer terms in the final settlement.

When that day comes, we in the United States will realize that a combination of the British, French, Italian and German navies will have far greater power than the American Navy, which must always be divided to some extent between the Atlantic and the Pacific. It is not probable that we will have an Oran or be able to destroy warships which might later do us harm.

The situation will be the most serious which has ever faced this country, but may be a reality before winter comes, and the only thing which now stands between us and such an eventuality is the doubtful ability of the British Isles to withstand terrific bombing by enemies whose bombing planes have already demonstrated their ability to wreck and destroy.

We have appropriated billions for new warships, but not for one year, at least, can many of them aid in the defense of this country, and one year may be far too late.

We do not wish to be classed with alarmists, but believe that when the British destroyed French warships, as a protection against their being added to the war power of a ruthless enemy, it was but a reflection of a situation which we must face if Great Britain falls.

Business Outlook

Business for the last half of 1940 will depend to a large extent upon war and peace developments in Europe.

A market forecasting firm in its current weekly reports very well states the case in the following paragraphs:

> If the nearby future should bring an end to hostilities, British war orders would stop and a readjustment would ensue in business—certainly in some industries that had been benefited by war contracts.
>
> Industry as a whole is in sound position to stand a readjustment from a European war to a peace basis. Even in the lines that would lose British war orders in the event of peace, a supporting influence would exist in the fact that many of these products could well be transferred to our own defense needs.
>
> But the force of such a readjustment would depend to a substantial extent on the resisting power existing in the domestic economy . . . it would be further tempered by the favorable aspects of peace . . . and it would be cushioned by the growing stimulus of our own far-flung armament program.
>
> To sum up: (a) Continued war would extend the recent expansion to boomlike proportions; (b) Nearby peace would bring a sharp but short readjustment, but soon the benefits would be felt of rehabilitation in Europe and armament at home. Policies must be kept flexible until events abroad furnish the cue as to which alternative will prevail.

Office Edition of Textile Directory

We now have in preparation an Office Edition of Clark's Textile Directory and expect to have it completed by the middle of August.

For 29 years we have published Clark's Directory of Southern Textile Mills, in pocket size, on January 1st and July 1st of each year and it is well established and also highly regarded for its accuracy and for the convenient arrangement of its data.

Hereafter the pocket edition will be published only in July of each year but, at the same time, an office edition will be issued.

The Office Edition will be more than a directory, for it will contain many sections which will be interesting and useful to mill managers.

There will be waste tables, production tables, price-per-pound tables and many others which will enable manufacturers to obtain desired figures without doing the actual computation.

There will be a large section containing statistics relative to the production and consumption of cotton.

A "Sources-of-Supply" section will enable textile manufacturers to find the name and address of manufacturers of articles which they wish to purchase.

The products of all of the firms which have advertising space in the "Office Edition" will be classified and the names and addresses of all of the salesmen for such firms will be placed in a special section.

The Office Edition of Clark's Directory of Southern Textile Mills will be sent, free of charge, to every textile mill in the South, other than knitting mills and therefore will afford full and complete coverage.

Stuart W. Cramer

The death of Stuart W. Cramer, Sr., marked the passing of one of the most forceful and colorful figures which has been affiliated with the textile industry of the South.

It was about 1893 that the Whitin Machine Works notified their Southern agent, D. A. Tompkins, of Charlotte, that they felt justified in reducing the sales commission which was being paid him.

With that stubbornness for which the father of the textile industry of the South was noted, D. A. Tompkins refused to accept a reduction and took the account of the Mason Machine Works.

Stuart W. Cramer, who was at that time employed by Mr. Tompkins as an engineer, had attracted the attention of the Whitin Machine Works and they offered him the account.

Mr. Cramer accepted and then began a remarkable career as machinery salesman and afterward as textile manufacturer and textile leader.

We have often heard it said, and believe it to be true, that Stuart Cramer was the finest salesman who ever traveled the textile industry of the South. He was a man of great force and of dynamic energy and left a fine record of accomplishments.

Mill News

Cramerton, N. C.—The Cramerton Mills will replace 100 box looms with new Draper looms. This will give them more capacity for handling orders on army uniform cloth.

Rutherfordton, N. C.—M. O. Dickinson and D. A. Deviney, both formerly connected with the Spencer Mills, Spindale, N. C., has established in Rutherfordton a plant for winding and processing cotton rayon and silk yarns.

Mobile, Ala.—J. C. Sanders, president of the J. C. Sanders Cotton Mill Co., states that the plant is throwing out and scrapping a part of its 30-inch automatic Draper looms on account of declining export demands for goods of this width. This machinery is being replaced with 36-inch Draper looms, says Mr. Sanders.

Columbia, S. C.—O. F. Feil, of Atlanta, Ga., bought the Glencoe Cotton Mill here for $25,000, June 29th. The deal was made at a court hearing before Circuit Judge G. Duncan Bellinger after the court refused to confirm the City of Columbia's bid of $20,000 made last September. Feil said he had not decided what type of business would be conducted in the mill plant.

Statesville, N. C.—The Duchess Throwing Co., a branch of the Burlington Mills, Inc., is now installing machinery in the building in Woodlawn formerly occupied by the Duchess Fabrics Corp. The new rayon plant will begin operation as the machines are installed. A. B. Bell, of High Point, is superintendent and R. F. Paschal, office manager.

Tulsa, Okla.—With some of the new equipment in operation, Commander Mills, Inc., is completing installation of 776 weaving looms in the new addition to its textile mills at Sand Springs, Tulsa suburb. When the enlarged mill is fully in operation the number of employees will be increased from 700 to 1,000 and production will be stepped up 40 per cent. Looms are being installed at a rapid rate.

Greenville, S. C.—The Greenville-National Corp. has installed more than $15,000 worth of new equipment in the Westboro weaving plant here and will immediately begin manufacture of woven elastic fabrics for the work clothing manufacturing industry.

The new firm is primarily a selling and distributing organization, which will operate here through an agreement with Westboro Weaving. Main offices of the firm are located in the city and L. W. Joyce, president and treasurer, will move here soon from Greensboro, N. C., with his family.

The firm's products, fine tapes and webbings, will be distributed to all work clothing manufacturing centers in the United States and Canada and branch offices or representatives are now being established.

Fort Mill, S. C.—The Springs Cotton Mills will soon start the installation of new machinery at the new addition which has been under construction to the No. 1 plant here. About $100,000 is expected to be expended on this project.

"When this addition is completed, the two Fort Mill plants of the Springs Cotton Mills will contain 104,000 spindles and will be next in size to the Lancaster unit of the company," stated E. W. Springs.

The operation of the new machinery in the addition is expected to call for about 100 extra workers. The company has rad under construction a number of additional dwellings to be used by the new operatives.

Roanoke Rapids, N. C.—Contract for reroofing the south end of the Patterson Mills Co. weave shed at Roanoke Rapids has been let to C. M. Guest & Sons, of Anderson, S. C., according to the engineers, J. E. Sirrine & Co. The work includes the removal of all existing saw-tooth type roof from column caps up, and replacement with new monitor type, 2-inch cork insulation, and 20-year tar and gravel roofing.

The Patterson Mills' production of fancy ticking, slip cover and upholstery fabrics will continue without interruption during the construction work on the weave shed, the engineers stated. A. Terrell is president of the Patterson Mills Co., which was incorporated in 1909.

Macon, Ga.—Scott Russell, executive vice-president of the Bibb Mfg. Co., announced recently that the executive committee of the Bibb had authorized an expenditure of $2,250,000 to carry out a program of improvement and betterment in the mills of the company at Macon, Columbus and Porterdale. The money is to be used to expand and thoroughly modernize all the mills of the company.

Mr. Russell stated that the program merely followed out the Bibb's established policy of taking all needful steps to keep its mills absolutely modern. He further stated that the officers and directors of the company felt justified in going forward with a program of this magnitude because of their confidence in the inherent soundness of the business structure of the country and because they felt that every manufacturing concern on which the government might have to call for goods needed for national defense should do whatever was needful to produce such goods speedily and efficiently, and at the same time be able to take care of the requirements of their regular customers.

Mr. Russell stated that orders had already been placed for a large quantity of new machinery and that the contemplated work probably would be completed within the next six or seven months.

Institute Publishes Cost Outline for Sheeting Mills

"A Cost Outline for Narrow Sheeting Mills" is the title of the latest in the series of cost booklets published by the Cotton-Textile Institute. Although intended primarily for distribution among the mills of the Narrow Sheeting Group, a limited number of copies of this booklet are available for general distribution, the Institute makes known.

Designed specifically for the type of mill that manufactures narrow sheetings and allied fabrics, this outline displays the essentials of a simple method of predetermining costs, for sales purposes, of the products of a typical narrow sheeting mill. It demonstrates with concrete figures, the step-by-step development of normal production costs through each of the several mill processes from raw cotton to the woven fabric. With certain modifications, this outline may be used as a guide to similar costs developments in other types of gray goods mills.

The mill organization selected for this demonstration is purely an imaginary one and all figures used are hypothetical, being employed merely for purposes of illustration. In method and arrangement, this cost outline resembles very closely the Institute's former publication, "A Method of Predetermining Costs in Cotton Yarn Mills," which was released in 1930.

Containing 40 pages, the outline is mimeographed on 8½x11-inch loose-leaf sheets securely bound between heavy paper covers. It is priced at $1 per copy and may be obtained direct from the Cotton-Textile Institute, 320 Broadway, New York City.

Cotton Use in U. S. for June Totals 556,529

Washington.—Cotton consumed during June totaled 556,529 bales, compared with 578,436 in the same month last year, according to preliminary statistics made public by the Census Bureau, Department of Commerce. Consumption for the 11 months' period this year amounted to 7,147,724 bales, compared with 6,337,073 bales in the same period a year ago.

Cotton on hand in consuming establishments June 30th totaled 1,160,025 bales, compared with 1,020,609 on June 30th last year, and in public storage and at compresses for the two periods there was a total of 9,572,142 and 11,948,792 bales, respectively.

Of the total consumption, 480,069 bales were used in the cotton-growing States, 60,724 bales in New England, and 15,736 bales in all other States. Linters consumed during June totaled 79,254 bales, compared with 73,699 bales in the same month last year.

Raw cotton exports in June totaled 134,000 bales, valued at $7,673,000, compared with 226,000 bales, valued at $13,029,000 in May, and 114,000 bales, valued at $5,945,000, in June, 1939, according to an analysis of the export statistics by the Department of Commerce.

Total exports for the 11 months of the current cotton season (August to June) aggregated 6,055,000 bales, valued at $336,196,000, compared with 3,220,000 bales, valued at $164,964,000, for the corresponding 11 months of 1938-1939, a gain of 2,835,000 bales, or 88 per cent, in quantity, and $171,232,000, or 103.8 per cent, in value.

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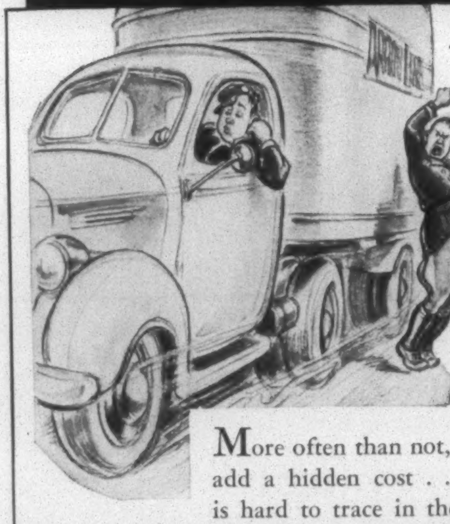

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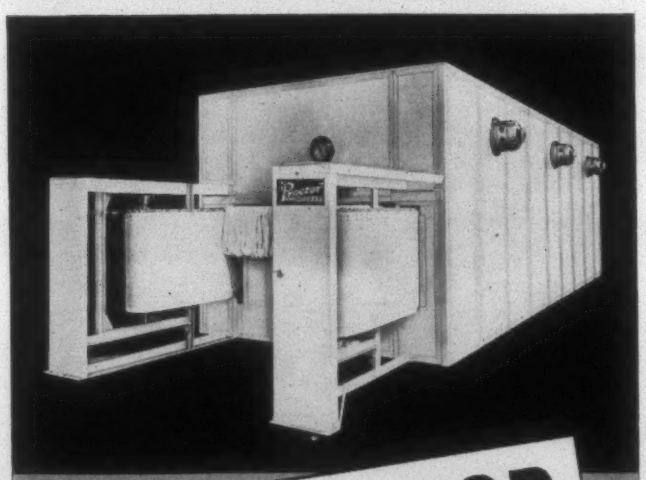


New PROCTOR Automatic YARN DRYER

This remarkable drying machine with its Patented Traveling Skein Protector assures you the highest quality results, greatest output in the least space, and the very lowest operating costs possible. Ask for illustrated folder.

PROCTOR & SCHWARTZ, Inc., PHILADELPHIA

Sanford Cotton Mills Wins Suit On Process Taxes

Washington, D. C.—The Sanford Cotton Mills, Inc., Sanford, N. C., has won its case in the United States Board of Tax Appeals, in which is involved the matter of processing taxes as provided for in the invalidated Agricultural Adjustment Act.

The Commissioner of Internal Revenue determined a deficiency of $2,853 in the cotton mill's income tax for 1935 by disallowing the deduction of $22,468 on the grounds that no liability existed in 1935 to refund processing taxes to customers as such liability arose January 6, 1936, when the court rendered its decision invalidating the act.

In reversing the commissioner's decision, the board states:

"A cotton processor in 1935 accrued its liability for processing taxes and contracted to readjust its sale prices to relieve its vendees of so much as represented the passing on of the processing tax if and when the tax were held invalid. After the tax was held invalid on January 6, 1936, it cancelled the accrual of 1935 taxes and substituted the amount of its contractual liability to vendees. Deductions of the substituted amount held proper because an accrual clearly in doubt may be adjusted when shortly thereafter in the next year and before the books are closed the doubt is removed."

Government Estimates 25,077,000 Acres Planted To Cotton

Washington, D. C.—The Department of Agriculture on July 8th reported 25,077,000 acres of cotton were in cultivation on July 1st, compared with 24,683,000 acres a year ago.

An average yield per acre would produce a crop of between 11,500,000 and 12 million bales this year, compared with 1939 production of 11,817,000 bales.

The department said that if abandonment this year is equal to the average for the last ten years, farmers will harvest 24,616,000 acres of cotton this fall. The acreage is well under AAA total allotments of 26 million acres for this year.

Most of the States reported about the same acreage as last year. North Carolina, however, where a shift from tobacco to cotton has taken place, reported a 10 per cent increase.

Georgia, Alabama, Mississippi and Arkansas reported virtually the same acreage as for 1939, while Texas reported an increase of 1 per cent, South Carolina and Tennessee 2 per cent, Louisiana 3 per cent and Oklahoma and California 4 per cent.

Department of Agriculture Has Cotton Movie

Washington.—A short film strip, entitled "Stepping Out in Cotton" and dealing with dresses and hosiery, is being completed by the Bureau of Home Economics and the Extension Service, both of the Department of Agriculture. The production contains both pictures and a lecture.

The film, which is one of several made by the two sections, will be chiefly used by extension divisions, to which it is available for a minimum charge to defray the costs of production.

Another strip, entitled "Making Slip Covers," is also in the process of completion. This production is composed of two films, one of which has been finished and the other is still in the making.

It has also been made known that a bulletin entitled "Make Surplus Cotton Work," will be issued early in the fall. This publication, which is being composed by the Extension Service in co-operation with the Agricultural Adjustment Administration, will deal with such things as household uses for cotton and also new uses for the product.

Schieren Publishes Data On Leather Belting

Recent publications of the Chas. A. Schieren Co., tanners and manufacturers of leather belting, New York City and Bristol, Tenn., include the following:

Schieren Engineering News Bulletin: showing results of recent strength-stretch control tests that reveal new economy values of modern stretch-free Schieren leather belting in industrial power transmission.

Schieren Products Catalog: illustrating and describing the complete range of Schieren leather products and accessories, including leather belting of all types, leather packings, textile leather specialties, mechanical leather specialties, belt dressings, belt cements, belt lacing and belt hooks, etc. Catalog includes the new American Leather Belting Association horsepower rating tables and other valuable engineering data.

Short-Center Pivoted-Motor Leather Belt Drive Data Book: compiled by the engineering committee of the leather belting industry for quick selection and pricing of complete short-center pivoted-motor drives. Contains lists of drive advantages, results of tests of these drives as compared with V-belt drives—shows the advantage in first cost the leather belt drives have and enables engineers and others to quickly select and price drives for any size motor up to 150 H.P. Also contains over 120 pictures of typical installations.

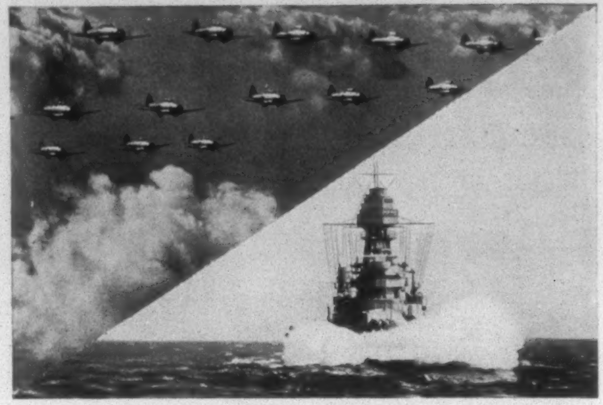
OBITUARY

JOEL T. RICE

Greenville, S. C.—Joel Towers Rice, 91, co-founder and a director of Belton Mills, died in the Anderson County Hospital June 25th after a brief illness.

Survivors include his second wife, Mrs. Bessie Bagby Rice, and these daughters and sons: Mrs. Daisy Littlejohn, Lake Wales, Fla.; Mrs. B. E. Coer, Greenville; Mrs. W. R. Haynie, Belton; Clarence W. Rice, Hartwell, Ga.; E. Blair Rice, Belton; I. Rex Rice, Greenville; Leon L. Rice, Anderson; George A. Rice, Pueblo, Col., and May Rice, Belton.

Mr. Rice moved from near Anderson to Belton as a young man and was active in the city's civic, business and religious life. With his brother, E. B. Rice, he pioneered in the cotton oil mill industry. For a number of terms he was mayor of Belton. He was deacon and active member of the First Baptist Church.



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Manufacturers, Overhaulers, Repairers, and Erectors of Cotton Mill Machinery

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Cotton Goods Markets

New York.—Business in cotton gray goods markets the week ending July 13th was of a miscellaneous character. Sales for the most part were confined to scattered small lots of a wide variety of items, the bulk of them for quick delivery. With nothing tangible in sight to stimulate trading, aside from continuous heavy outlays for preparedness, buyers continued to operate cautiously and were obviously awaiting for some signs of generally improved demand. Prices for the most part were fairly firm, although there were instances of forced selling here and there. Sheetings sold in slightly better volume. Ducks continued outstanding and mills in this division were beginning to be faced with the problem of alloting deliveries.

Sentiment was more optimistic than in some time. Convinced that buying will turn active in the latter half of the month under the impetus of continued heavy purchases by the Government for defense purposes, many mills were of the opinion that the best policy from now on would be to hold prices firm and wait for demand to develop. There was also more inquiry for goods for export and there were no indications that purchases by foreign nations would expand sharply in the next few weeks.

Although the volume of cotton textile orders placed by Washington since the defense program was launched 60 days ago is already substantial, its influence upon prices and production has become evident to only a limited degree thus far. There are several apparent reasons for this lag, sellers note. Firstly, the Government buying has yet to reach really major dimensions. Secondly, the buying has focused upon a narrow area of the industry. Thirdly, trade buying has remained in the background during recent weeks.

Small, scattered fill-in purchases of combed staples were reported. Converters are found to be generally filling their current needs from contracts placed a month ago. The business booked at that time resulted in backlogs which, for some mills, still have some weeks to run. One or two of the larger units indicate they are currently operating at 70 to 75 per cent of capacity, but are not building inventories.

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Cotton Yarn Markets

Philadelphia.—Some improvement in new buying of cotton yarn is reported here. In some lines, moderately more yarn is being taken in, as these manufacturers gradually enlarge their operations after a period of seasonal curtailment. Buying in general is regarded as somewhat spotty, but the majority of spinners are seemingly maintaining quotations. In some quarters it is conceded that in the last few weeks it has been demonstrated again that in sale yarns it is necessary for buying to remain continuous at a certain minimum volume to prevent marginal mills from cutting prices.

Carded weaving yarns are at present most subject to pressure for concessions. Carded knitting yarns are reported relatively firm. As far as ordinary quality carded yarns are concerned, weakness in the cotton markets discourages yarn buying and seemingly there is no incentive for buyers to anticipate other than usual requirements.

In the last several weeks sales of single and ply combed peeler yarn have apparently exceeded current shipments by nearly 20 per cent in the case of the singles and by about 35 per cent in the two-ply. Sales of the ply yarn were about equal to the total sold in the two months preceding and have been running ahead of current rate of deliveries since the end of the first week in June. Sales of single combed yarn in this period have been nearly three times the weekly average for May and a considerable part of the new business has been taken at improved prices.

There still remains a very substantial volume of combed peeler yarn to be purchased for fall use, especially of the single counts, and local distributors claim the present price range should be regarded as attractive to buyers who have not yet begun to cover ahead. It is pointed out that many who bought more yarn in the last few weeks than they had purchased before since last fall are likely to be back in the market again before August 1st.

Among combed peeler yarn spinners there has been an increase in spindle operations of about 10 per cent as compared with a month ago, but this additional production has been little more than enough to keep the yarn mills abreast of their delivery requisitions. Yarn mills' unsold stocks of yarn are at a very low ebb, it is stated, and their advance production against anticipated requisitions on standing contracts is likewise smaller than customary.

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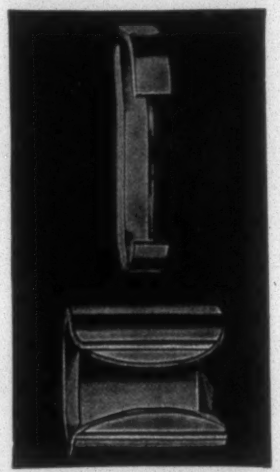

EDGE

The swirling of the end in passing through the traveler produces smooth even yarn.

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Worm Takeups, No. 3 batteries and many other good parts from these looms.

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WANTED

Weave Room Foreman. Must be experienced on C. & K. Automatic Looms. State age, full experience, salary expected and names of all previous employers.

Address "Foreman,"
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Mayfair Mills Wins Case

A county civil court jury has returned a verdict for the defendants in the case of T. A. Holland versus Mayfair Cotton Mills, Arcadia, S. C., in which the plaintiff sued for $2,500 actual and punitive damages.

The plaintiff alleged that in Septemper, 1939, he was employed by the defendant as a loom fixer at a contracted base pay of $16.50 per week, and that for ten weeks portions of his wages were deducted and directed to "the alleged payment of the alleged debts of some other person than the plaintiff."

Answering, the defendant stated that Holland was employed at the mill in 1929, and that on or about March 10th of that year he severed his connection as an employee, owing the mill store at that time the sum of $19.57.

Further, the defendant contends that in September, 1939, the plaintiff resumed his employment and that nine deductions of $2 a week and one deduction of $1.57 were made "at his direction and upon his instructions" to discharge the obligation.

U. S.-Jap Agreement On Textiles Extended

Washington, D. C.—The State Department announced July 15th that the Japanese-American agreement limiting exports of Japanese cotton piece goods to the Philippine Islands would be extended for one year from August 1st.

The agreement restricts these exports to 45,000,000 square meters annually.

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WANTED—Master Mechanic. Must be experienced as Master Mechanic or Assistant in all kinds of cotton mill mechanical work for spinning, weaving, and dyeing, including electrical and steam power plant operation. Address "Experienced," care Textile Bulletin.

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Cite Rise in Cotton Bagging Use in Plea For S. C. Rail Rate Cut

Columbia, S. C.—Plans for the heavy use of cotton in making of cotton bagging were disclosed here when application was made to the State Public Service Commission by Southern railroads for reductions in freight rates on cotton bagging.

In making application, the Southern (freight rate) Classification Committee reported that contracts have recently been signed calling for manufacture of 4,500,000 pounds of cotton bagging in the two Carolinas.

This would be sufficient to cover 450,000 bales, or about half the production in South Carolina in recent years. It was taken here as the sign of a significant trend toward the use of cotton instead of jute in the manufacture of bagging.

Assembling the Frame Work of the Loom

(*Continued from Page 20*)

guesswork. The shuttle should start moving out of the box, on the pick, when the crank arm is on exact top center, going back.

After the above setting is made, then should the lug strap be let out, or taken up in length, the pick will be changed from exactly top center. The loom will pick a fraction late if lug is let out in length, and will pick early should the lug be taken up in length. Therefore, in order to obtain an exact setting on the pick motion it is necessary to adjust and tighten every other part of the pick motion throughout before timing and tightening the pick cam in running position.

This is not the customary way of setting the pick motion, but it is the only way to obtain an absolutely accurate setting on it, and a fractional difference in timing of the pick cam can, and does prevent efficient operation of the loom. Some will contend that some looms should pick earlier, and some later, than top center position of the crank arm, but after extensive study and experimenting, without any prejudice and only seeking the truth, I have failed to become convinced that they are correct in their contentions. If the shuttle leaves the box before crank arm reaches top center position the shuttle will be driven into the warp before the sheds are sufficiently open to receive it and allow free passage. Also the shuttle will be momentarily wedged, or depressed, by the warp yarn of the top and bottom sheds, and thereby forced back against the reed, causing ridges or furrows to be worn in the outer back wall of the shuttle. This momentary wedging, or depressing of the shuttle against the reed, will of course be very slight, but it happens very often, and will certainly cause the gradual wearing away of the shuttle. This will also retard the passage of the shuttle, because it consumes a portion of power which the shuttle needs for a quick passage from end to end of the loom. This will also cause undue chafing and breakage of the warp yarn, especially near the selvages.

There are numerous reasons why the loom should not pick later than top center position of the crank arm. Picking later than this will give a harsh heavy pick and will cause undue strain and backlash throughout the entire loom, creating unnecessary wear and breakage, and the shuttle will not track, or travel straight, thereby creating the danger of shuttle being thrown out of the loom and broken, or breaking other parts.

The picker sticks and pickers are two vitally important parts of the pick motion. The straight throw and passage of the shuttle is absolutely necessary if the loom is to function efficiently and economically. There are numerous kinds, sizes and designs of picker sticks being used. I have seen weave room where the looms were kept in good repair, the very best supply parts available were bought and used on the looms, and still the upkeep cost was unreasonably high and the loom efficiency low, due solely to the fact that the wrong size, or badly designed, picker sticks were being used. I have seen this happen more than once, and I have also seen it corrected by changing to a picker stick of proper size and design, and this is the only proof acceptable and conclusive with me.

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BLOWING ROCK, N. C.

4,000 Feet Elevation—Average Temperature—67°
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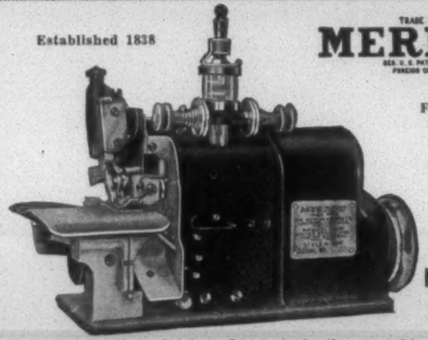
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efficiency at
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with maximum
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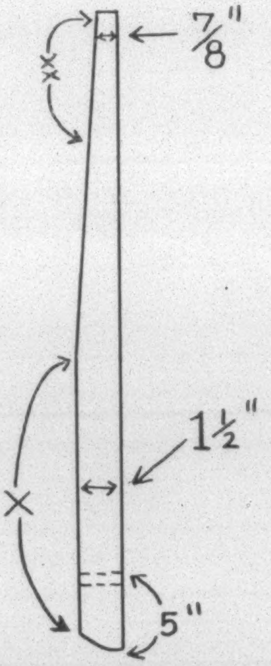
Atlanta, aG.

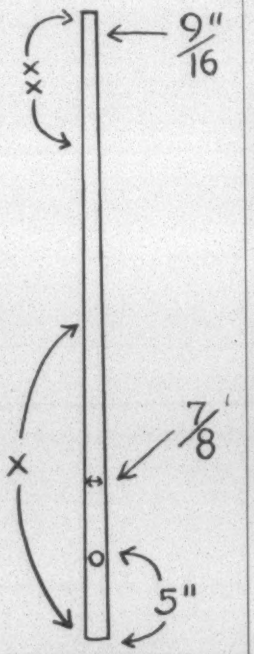
It will cost very little for anyone to try and prove in any weave room.

I have found that the inclination of a great many weave room men is toward a stout, large, rigid picker stick. They are possessed with the idea that if the sticks are large and rigid they will have less breakage of sticks. This is sometimes true, but not in the ordinary cases. This is dependent on the size or width of the loom, and the power required to operate it on the fabric being woven. But in every case the large rigid sticks will cause excessive breakage on other parts of the loom.

All picker sticks should have a slight spring or give on the pick. This will insure a snappy throw and quick passage of the shuttle, and this is essential for efficient operation of the loom, any loom. A boy will not select a stiff rigid stick for a bean shooter, or choose too stout a rubber for a slingshot. The same principles are involved here. With a rigid picker stick we lose the advantage of that slight spring which gives the shuttle that quick, snappy throw necessary for the proper operation, and when that power is lost it must be obtained in some other way, and this additional power, added in that way, will increase the strain and produce unnecessary wear and breakage on other parts of the loom. I show herein in Figures A and B a picker stick designed in such a way as to give satisfactory results, and retain its original shape. A picker stick must of necessity be graduated in size, smaller at the top than at the bottom. But they should not be tapered or graduated in size their full length from bottom to top. They should be the same size from the bottom up to where the lug strap is attached, indicated by X marks in Figures A and B, and graduated in size from that point on up to the top. The taper or graduation in size should all be on the back and both sides of the



SIDE VIEW
Fig. A



FRONT VIEW
Fig. B

—RAYON— IDENTIFICATION *with* TINTINOL

BORNE SCRYMSER COMPANY NEW YORK TINTINOL

Certified Fugitive Dyes for all Synthetic Fibres and Admixtures

TINTINOL *is Ready for Use in Any Color*

TINTINOL involves the control of three essential factors in Rayon Manufacturing by one simple application . . *Moisture, Lubrication, Tinting.* ★ It imparts tenacity similar to good running cotton, produces a firm web, reduces the crunch, reduces static and split laps. It is the most convenient and economical tinting process known. *No extra handling . . . no drying . . . no heating . . . no harsh stock or curled fibres.* ★ TINTINOL is shipped in light steel drums which serve for supply reservoir. You can have *any* color by the turn of a valve. ★ Base Oil (SS) concentrate is also available for conditioning white Rayon stocks where tinting is not necessary.

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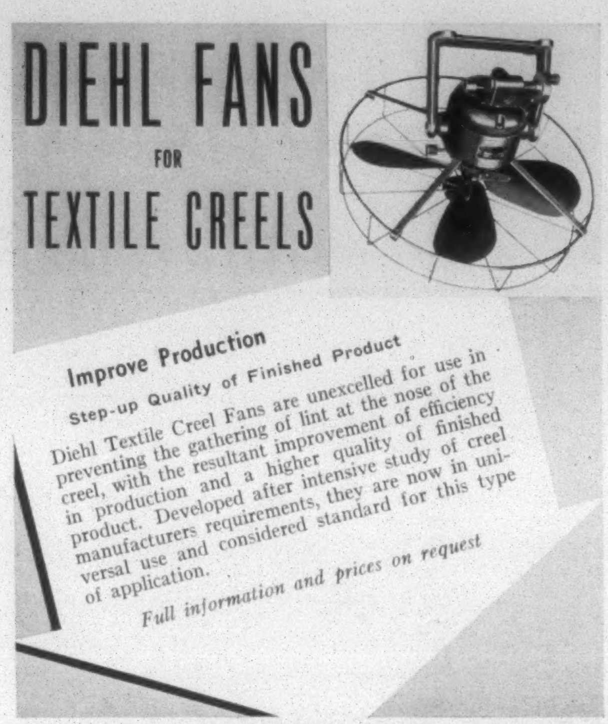

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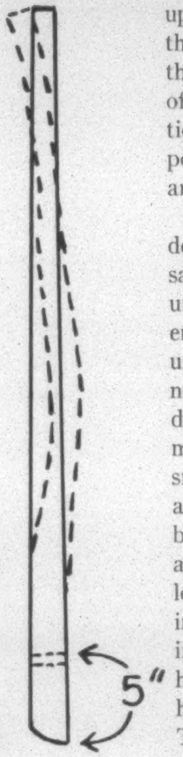
Tel.—247

stick, and not any on the front. The front of the stick should be perfectly straight.

The sticks shown in Figures A and B are designed for an L model 90-inch Draper loom; all dimensions are shown. This size stick is suitably adaptable to other model and width looms. However, on small narrow looms, less than 40 inches in width, I would suggest cutting down on the size of stick 1/16 to ⅛ inch between the X and XX marks, indicated by arrows in Figure A. The top part of the stick, from XX mark upward, should be left the same, as it is the proper size for the picker and also the picker stick guide in lay. The size of the stick at the topmost part, in relation to the picker stick guide is very important, but this will be discussed at another place.

In Figure C is shown an improperly designed picker stick. This stick is the same size at the top and bottom as Figures A and B but is graduated in size its entire length. This stick, after being in use a short while, will become permanently warped or bent, as indicated by dotted lines in Figure C. This is why so many mills have gotten away from the small picker stick; they wish to get away from this warping and bending backwards. This is clearly understandable, because it is impossible for the loom to function properly with the stick in this condition, because it would be impossible to parallel the picker. The hole in the stick, for the heel bolt, shown here, is five inches from the bottom end. This distance of course will vary on some different model parallels.



A Reconstruction Program for American Enterprise

(*Continued from Page 14*)

return is hardly equal to a reasonable rate of interest. Our system of taxation takes far too large a proportion of the possible profits and the investor must assume the entire loss. The venture spirit that has made American enterprise is largely frozen in an uneconomic attempt to penalize outstanding accomplishment. That should be considered in our platform of reconstruction. But those who can least afford it suffer the most.

I mentioned economic panaceas and political intolerance as influences restrictive to enterprise. As to the latter, little need be said. I remind you of the story how in other countries they knight conspicuous success, while in our country the practice has been to indict that success, and without just discrimination, and when not possible in a Court of Law, then before the court of Public Opinion. I speak feelingly because I have had it both ways. This is another factor in our reconstruction program.

As to specific economic panaceas, these are well known to all of us. They have been discussed freely and frequently. Time does not permit their consideration here. This might be said, however, only by an expanding economy can we have a greater supply of useful goods, a higher standard of living and reduced unemployment. The return of confidence in the long-pull position of the enterprise system is an essential step before an expanding economy is possible. Increased wealth means increased production. Restriction on production, the theory of scarcity, the political creed of today—together with the idea of getting something for nothing—should have no place in the American system of things. Our motto must be the "theory of plenty." Sooner or later we will learn that we cannot penalize some for the benefit of others. We are all a part of the same economy. Sooner or later we will learn that wages are determined solely by the productive opportunity given the worker. We may by law require that the wage rate be raised to a definite level or hours reduced, or both, but we take from some and give to others. There can be no gain.

Tax Upon Technological Progress

You know and I know that the only way to provide more things for more people, in more places, the theory of plenty, is by increased efficiency through capitalization of technological improvement, more productivity per worker and more hours of work per week. With the national policy of establishing a definite ceiling on the hours of work, we now propose to plug the one remaining opportunity for progress and place a tax upon technological progress. Taxes once placed usually increase, hence the ultimate result is bound to more and more limit the increase in efficiency of production otherwise possible. Aside from the depressing economic effect of such a policy on the economy as a whole, we are erecting a specific barrier against the capital goods industries which, in terms of employment, directly, and in services related thereto, employ one-half our workers. This is an astounding proposal. And undoubtedly the most effective economic barrier against industrial progress yet advanced and there are many of them. That certainly has no part in our program. On the *contrary* a soundly conceived plan to encourage, by incentive taxation, technological progress could well be considered. Higher wages could be sustained, lower prices would be possible, employment stimulated—true factors in an expanding economy. Such a program has demonstrated effectively its usefulness elsewhere.

Some time ago a highly placed public official stated in effect, in speaking of the unemployment problem, that it could be solved easily, if properly attacked. His plan was to reduce working hours as far as necessary to create additional jobs, maintaining the same wages as at present for the reduced working week. That same idea is being constantly advanced—the 30-hour week. It is a very dangerous proposal. Why is it we cannot understand that money wages must be considered in terms of what the money will buy? Where is the gain to the economy when prices must rise in the same proportion as wages? We cannot raise ourselves by our own boot straps, yet that is what we keep continually trying to do.

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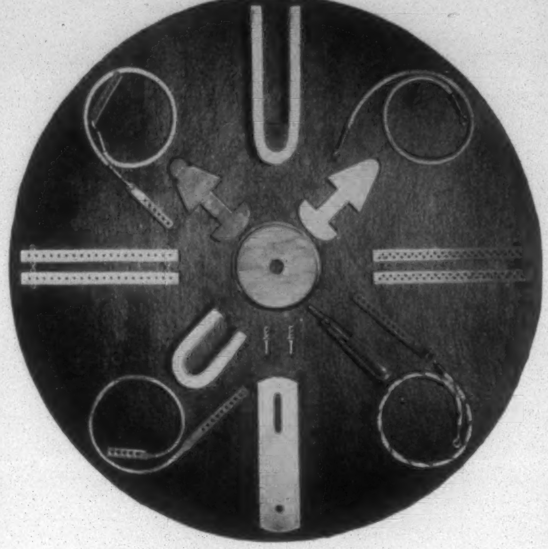

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we must not fail to realize that, after all, American enterprise is largely one of small units. About two hundred thousand new businesses are started each year with an average of seven employees. Too often we examine into some question using as an example one or more of our great industrial units. If the idea is to attempt to prove some desired point nothing more need be said. If it is to get the real facts, such conclusions are far from indicative of the condition of the system as a whole. The encouragement of small business is of vital importance in the problem of an expanding economy. High taxes on business and personal incomes add to the difficulty of making savings. In looking back over the years to the beginning of many of the enterprises now a part of General Motors, it is clear that in those early days their lives were in frequent jeopardy due to lack of adequate capital. And yet, while those enterprises were then employing relatively few workers, now they are employing tens of thousands directly, and indirectly hundreds of thousands more. Today with conditions as they are, the mortality of such struggling enterprises must necessarily be higher and yet they are vitally needed, not only because of themselves but because they are frequently the beginnings of far greater things.

Encouragement of small business units is an essential part of our plan of reconstruction. The most intelligent approach is the broad one of doing those things that will expand the economy as a whole and make it practical and worthwhile to take the risk.

Short Hours Cannot Compete With Long Hours

Perhaps some of us may sometimes wonder as to the effectiveness of an industrial system under an autocracy as compared with that of our democracies. It seems to me that this is perfectly clear. Short hours cannot compete with long hours. An obsolete technology cannot compete with an advanced technology. An economy tolerating millions of unemployed cannot compete with an economy providing full employment. Efficient organization and management cannot compete with the inefficient, and all this under all circumstances. But, on the contrary, personal initiative, the reward of accomplishment, ambition to succeed, full scope for one's talent, the honor of one's neighbors—all component parts of our system of free enterprise—must, from the very fundamentals of human reactions, always be more effective than any regimented individual—the by-product of a planned economy.

Thus, through philosophical discussion we have evolved the concept or principle of high generality and low generality. And the need of one as compared with the other—an important distinction in determining industry's part in our program of reconstruction. The specific technical business problems, such as engineering, production, distribution, etc.—the very essence of business—are ideas of low generality, whereas ideas regarding the business as a whole in its relationship with the community as a whole, are ideas of high generality. Obviously, high concentration of thought and effort on ideas of low generality are essential to business success. There can be no shortcut—no neglect of these ideas. But that is not enough. Attention must also be given to the development of ideas of high generality, as a social philosophy. Thus we pass from industrial leadership to industrial statesmanship.

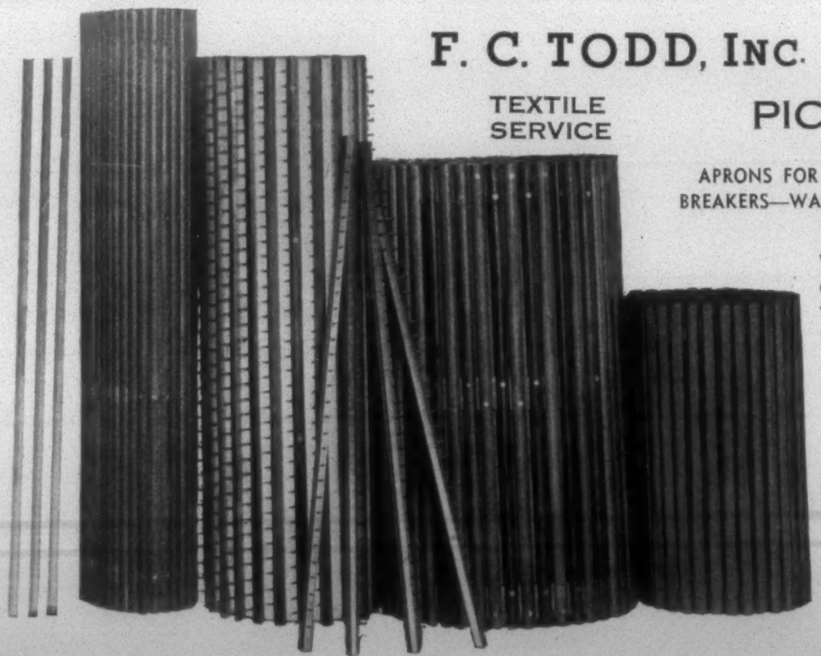
It is essential for business management to become deeply absorbed in the details of problems of immediate urgency—administrative management, in other words. While these cannot be neglected, there must be some definite division of organized effort so that there will be no neglect in the development of a social philosophy which will carry forward aggressively the novelty of social and economic invention—policy formation, in other words. The latter determines the fundamental concepts of the business and evaluates the problems before it in terms of its future progress and stability, its relation to the economy as a whole and its obligations to the social order. The former deals with engrossing problems of administration found in any business. The General Motors scheme of management provides for a separation of ideas of high generality from those of low generality and requires executive attention to both phases of management. This is essential to industry's broader responsibility in this period of rapid change through which the economy is now passing.

Undoubtedly we are now hammering out a social economic philosophy to carry on for the future. The development of a business philosophy obviously is the job of business statesmanship. Those devoid of actual experience in business cannot develop a philosophy consistent with business needs or construct satisfactory operating policies for its conduct. We have seen already that those with little experience wholly unqualified as to the technical necessities of business, such as politicians and reformers, are making inroads on the management and operation of the enterprise system through regulatory and actual control procedures. The result establishes the fact.

It has always been the responsibility of industrial management to keep ahead of the consumer demand for its goods and services. It now becomes the responsibility of industrial statesmanship to recognize the social trend in est and the needs of the society as a whole, properly corelation to its own problems. Thus enlightened self-interordinated, assume a partnership relation in a common effort. The enterprise system becomes an integral part of the whole community and not in any sense an abstraction or something apart from the general economy. Just as free society or democracy is dependent upon successful enterprise its perpetuation becomes more assured as industrial statesmanship assumes this obligation. It may be regarded as one of the essential elements, perhaps the keystone of a program of reconstruction of our free enterprise economic system. Upon its acceptance depends the perpetuation of that system.

Conditions and influences change. The present period is one of great and rapid transition and one of great potential anger. The enterprise system must be progressive. It must keep in touch with the changing environment. The manifold and demonstrated benefits of the free enterprise system demand that those involved with its responsibilities fight to the utmost proposals based upon the philosophy of scarcity. Such a philosophy, together with too much emphasis on the importance of security, leads to stagnation of the economy. We have seen that a progressive economy must contemplate the element of risk. Set-backs must be expected. However, the underlying forces and influences will overcome false doctrines if given an opportunity to assert themselves. The enterprise system must go forward.

Much of the industrial equipment of America is far from modern. A tremendous opportunity exists to rebuild America on the basis of today's technology. Complete modernization, superimposed upon the demands of the consumer industries, would employ all available labor for years. The work week might well have to be increased, especially giving consideration to the increased produc-



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tion of goods and services now required for national defense. An economic solution of the housing problem would employ a new technique, new materials and require large-scale production methods. There lies one of the most important tasks of industry, looking toward the future. It offers the greatest industrial opportunity of modern times. If an intelligent attack on the living standards of the so-called "submerged third" were made it would create an additional and large market for consumer goods.

Thus we see real opportunities for the investment of our present and future savings. There is a big job to be done. I emphasize this point because today there are so many who fear, and have apparently satisfied themselves, that today and tomorrow our opportunities may not be adequate to employ our savings. That means a static economy. If that proves true it will be solely because government has continued to maintain excessive obstacles against enterprise and the prospects of business profits.

It is to be hoped that the domestic political and economic abuses and limitations which have beset industry for so many years may come to an end or be corrected to an important degree in this year 1940. Should that occur, it would almost certainly be construed by the business community as justifying a return of confidence in the long-pull position of constructive enterprise. Unemployment no longer will be a national problem. On the other hand, the policy of encouraging instead of discouraging constructive enterprise and the return to national economic sanity must not be interpreted by industry as a license to re-establish any previous order inconsistent with the broader trend of economic and social change—absolutely not. On the contrary, it should be regarded by industrial statesmanship as a period within which it must justify its ability to assume these broader responsibilities. Therefore the five-year period just ahead is certain to be a most critical period. It will be a period of transition and formation in which the economic system of free enterprise must reassert itself. It will be a period in which those possessing the ability and responsibility of industrial statesmanship must exert all the intelligence they possess; with all the courage at their command to formulate constructive policies designed to steer the economy on a safe and reasonable course. This responsibility to future generations is almost beyond our conception. Never before has the occasion demanded that industrial management assume such a responsibility—the reconstructing of the economy on a firm foundation of economic law. Tremendous as these problems unquestionably are, there will be superimposed upon them additional responsibilities of even greater magnitude—to an extent we can not now determine—the problems incidental to the post-war period.

Thus it is evident that the future—today, tomorrow and beyond—demands the co-ordinated effort of the most experienced and intelligent among us. In addition it demands the courage that comes from the firm conviction that economic truth crushed to earth will rise again. It must be patriotic. It cannot succeed as a partisan effort. And further, it must not fail.

Evaluation of Special Finishes for Textiles

(*Continued from Page 15*)

used by one investigator to provide a compression resilience factor $= \frac{R}{C}$

The permanence of crush resistant finishes should be taken into consideration in the evaluation of the merchandise; the effect of dry-cleaning and washing should be observed.

Moth Resistance

Treatments to prevent moth damage are numerous. Hundreds of different chemicals and many different processes for applying mothproofing agents are employed. Some of the mothproofing products offered in recent years have been toxic to man rather than to moths. Other mothproofing products have been of rather doubtful value. Investigators are still in disagreement as to the best methods to be employed for the evaluating of mothproofing agents. Some prefer to run tests in petrie dishes or glass jars with moth or carpet beetle larvae in immediate contact with the treated fabric. Others consider the use of placing both treated and untreated fabrics in the same vessel. Some prefer to use large cabinets wherein are hung specimens of the treated materials. At the bottom of these cabinets we find feathers abounding in moth life. The millers fly around in the cabinet and deposit some of their eggs on the materials, much as they would do under actual conditions of textile storage in the home. This test of course is probably not as severe as the petrie dish or jar tests. Some investigators prefer to attach primary importance to the amount of moth excreta collected after a pre-determined test period. Others prefer to place maximum emphasis upon the degree of damage done to the textiles. One investigator prefers opening the larvae and examining the alimentary contents. If the fabric has gone more than one-half the length of the canal, the toxicity of the mothproofing agent is considered too low.

The effect of washing and dry cleaning on the permanence of mothproofing agents requires serious consideration. Materials that are normally washed, should be treated with wash-resistant mothproofing agents, while those that will normally be dry cleaned should be given special treatment to withstand the cleaning operation.

Light, Water, Mildew

Certain fibers become tender upon exposure to light. To prevent this action certain manganese salts have been employed. Also phenolic and ureic resins and other products have been used. The evaluation of the light resistance of these materials would include fadeometer tests on washed and dry cleaned samples as well as on the original fabrics.

Water-resistant finishes for textiles have been on the market for many years. Until recently these finishes had been removed by dry cleaning and some of them had been removed by washing.

Recently there have appeared on the market water-resistant finishes which resist a number of dry cleanings and washings thereby lengthening the serviceability of the article.

Numerous textiles such as shower curtains, awning material, glider covers and tent materials are often subjected to long contact with water often under subdued light conditions thereby encouraging the growth of mildew and so resulting in the rotting and tendering of the fabric.

The application of mildew and rot-retardant finishes has helped materially to increase the serviceability and therefore the sale of this type of finish.

For years many curtain materials, drapes and furniture covers have been treated with water soluble finishes

(*Continued on Page 48*)

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Buys 574 Pacific Dwellings

Columbia, S. C.—R. E. Ebert, president of the Dixie-Home Stores, with headquarters in Greenville, S. C., has purchased 574 dwellings from the Pacific Mills, Hampton Division, which are located in this city, at a cost said to be approximately $250,000. Mr. Ebert stated that his plans are to resell these homes to the operatives of this group of mills. The Pacific Mills retained some of the residential property, mostly located on and near Whaley street, for the departmental superintendents, second hands, office force and other officials.

Care In Weaving

(Cotton Trade Journal)

We think those who are in charge of the job of trying to boost the consumption of cotton goods are overlooking something in not studying the great pains to which the weavers of rayon goods are going to produce perfect goods of great artistic merit as well as of great durability. Time was, not so many years ago, when the one great criticism of rayon was that the goods made from it had a shoddy look and did not wear. The argument then was that rayon would never replace cotton in many lines because cotton was the superior fabric, especially as to durability.

Now all this is being changed and we hear of great mills in this country, especially in the South, which are building rayon weave rooms in their plants, air-conditioned, fluorescent lighted and with the flooring so constructed as to do away with the slightest hint of vibration. Vibration, so it is explained, destroys quality when it comes to rayon weaving of the present day. We read, in the description of one new weave room, that the specially built floor extends down to the earth itself, with its first layer of tar concrete, on top of which is a heavy creosoted plank sub-floor, then a one-inch intermediate floor of creosoted boards and, finally, a one-inch top floor of maple. Whoever heard of a cotton weave room being constructed at such pains and expense?

And yet it would seem that it would pay if the weavers of finest cotton goods would go to added pains to perfect their goods. We can remember when the wealthiest cotton men in the South would wear nothing but cotton shirts, tailor made from the finest material that could be bought and it was often impossible to tell, except on the closest inspection, whether these garments were made from cotton or silk and, quite often, the cotton goods were superior in appearance as well as in durability, to those made from silk. The well dressed business man of the early part of this century did not go in much for silk. He preferred cotton.

With new methods of weaving in colors, even newer methods of printing goods, brand new fabric effects, based on fine cotton goods, are possible today which should put many lines of cotton fabrics in a class by themselves. Entirely new effects, so it is said, in the way of printing cotton goods may be had by the use of the new synthetic resins which have only recently been put on the market. For these printing resins, greater penetration into the goods, more flexibility and improved laundry resistance may be obtained. In fact, the researches which great chemists in this country have made in the last few months, seem to put an entirely new face on the printing industry as it applies to fabrics. We hope cotton goods weavers and printers will make full use of them.

Further Use Of Cotton Bagging Possible

Further evidence of the increasing attention on the part of raw cotton interests to the appearance of the American cotton bale is reflected in a resolution adopted at the recent annual meeting of the Alabama Cotton Ginners' Association at Birmingham. The resolution, copy of which was directed to the Cotton-Textile Institute, reads as follows:

Whereas, there have been many complaints by domestic cotton mills caused by the use of oiled rusty cotton ties, and also by stained cotton caused by the use of bagging stenciled or marked with ink or dye which is not fast; and

Whereas, there has been much complaint of the appearance of the American bale of cotton in foreign commerce,

Be it resolved that the ginners of Alabama are urged not to purchase or use cotton ties which have been painted or oiled in any manner, and that they refrain from the purchase or use of bagging which is marked or stenciled with ink or dye which will fade, and that the ginners refrain from stenciling any bale of cotton with numbers, initials, etc., and that they use instead metal tags to identify such bales.

Be it further resolved that the Secretary of Agriculture of Alabama work towards the introduction and passage of a bill requiring the addition of six yards of new bagging on each bale compressed in Alabama for export.

Be it further resolved that copy of this resolution be sent to Secretary of Agriculture Henry A. Wallace and also a copy to Alabama Cotton Manufacturers' Association.

Be it further resolved that a copy of these resolutions be sent to the National Cotton Council, and also to the Cotton-Textile Institute, New York City.

Chatham Pays Big Bonus To Employees

Elkin, N. C.—A Fourth of July bonus totaling $35,000 to 1,800 employees was announced by Thurmond Chatham, president of Chatham Mfg. Co.

Individual letters from Chatham accompanied the midsummer bonus checks. In the letters Chatham called attention to the troublesome times and urged continued cooperation and work to build up the strength of the nation.

Distribution of the bonus was based on individual earnings. The firm has paid several mid-summer bonuses to employees in the past.

Actively interested in other efforts to bring a revival of patriotism, Chatham found the proximity of the Fourth of July celebration of the American Declaration of Independence offered an opportunity to cite reasons Americans should be patriotic.

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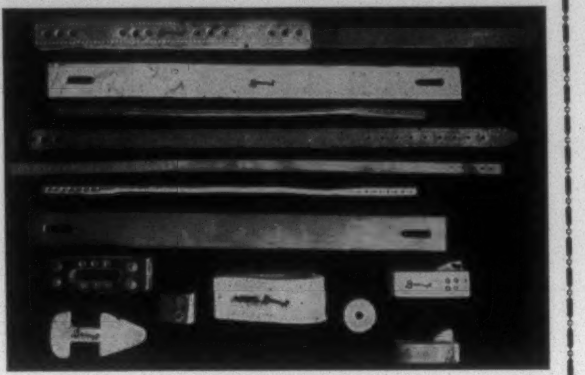

Illustration Shows a Few of the Different Straps Manufactured By Us

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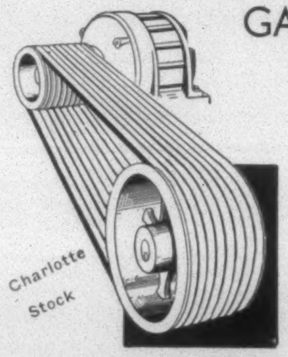

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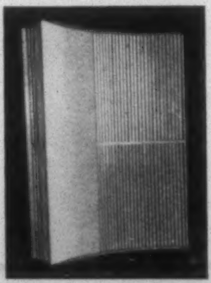

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Evaluation of Special Finishes for Textiles

(*Continued from Page 45*)

to produce glossy and crisp effects, which unfortunately were removable by water. The so-called permanent finishes have in a number of instances superseded these old type finishes by virtue of the fact that they imparted to textile fabrics a gloss and crispness capable of withstanding innumerable washings.

Any number of products have appeared with accompanying claims to the effect that they render textiles more resistant to abrasion; in the case of stockings—to running and snagging and in the case of pyroxylin coated materials to scuffing, creasing and folding.

The value of these finishes varies considerably.

Those finishes which have been produced to reduce the incidence of runs and snags in stockings have proven, however, to the best of my knowledge, to be without worth.

Gas Fading of Acetates

For the past eight years, we have been confronted with the problem of gas-fading of dyed acetate rayons containing blue dyestuffs. Blue, purple, beige, green and gray colored articles have been returned by customers because the fabrics reddened either before or after washing or dry-cleaning. For many years, the exact cause of this fading was not understood. Only recently it was found that the fading could be retarded by the use of various finishes.

Investigation also disclosed that when the proper blue dyestuffs were used this type of fading did not occur.

Because of the rapidly increasing number of complaints arising from the reddening of these materials there has resulted a marked antagonism on the part of retailers to acetate rayons. This attitude may spread to acetate rayons regardless of color unless the reddening problem can be overcome. The retailer happens to be in the front line trench facing the brunt of consumer reaction. The consumer good-will which retailers have been trying so hard to build up has in some instances been dissipated because consumers are unhappy with this type of merchandise.

Consumers look to retailers to provide them with satisfactory merchandise. They look to retailers for facts concerning this merchandise.

Using finishes which merely retard the reddening of the acetate rayon until they are contacted by perspiration or until they are washed or dry-cleaned tends to increase the degree of consumer dissatisfaction. Many retailers have not understood how it was possible for these dyed materials to redden after they had been in the hands of their consumers for a week or a month or two months. Today retailers are becoming informed on this subject. As a result of their awakening to the true situation, they question the use of these finishes and are beginning to insist that acetate rayons be dyed properly instead of their being finished to hide the fact that they have been dyed with inferior dyestuffs.

Flame Retardent Finishes

Recently, we have seen an increase in the number of brushed rayon garments and blankets. These materials frequently represent a fire hazard because they encourage the rapid spread of flame.

Numerous products have been developed to make them flame retardant. The problem confronting the producers of these finishes and those that apply them, requires that they take into consideration the hand and the appearance of the fabric and the harmlessness of the flame retardant agent. The additional problem confronting the retailer is the permanency of the finish. If the finish is removed by washing or dry-cleaning, then of course the article will, upon being washed or dry-cleaned lose this property and again present a fire hazard.

The creation of a permanent flame-retardant finish for textiles will not only increase the sale of brushed rayons but will also eliminate the fire hazard accompanying the use of cotton blankets, numerous curtains and other drapery materials and sheer rayon and cotton garments.

I have just given you a brief outline of the scope of special finishes and some of the angles pointing to their evaluation.

Consumer Approach

During the progress of my discourse, I refrained, with a few exceptions, from discussing the consumer approach to these special finishes.

I shall now discuss this approach with the object of encouraging the use of a similar approach to the problem of special finishes and their application to textiles by those who manufacture the finishes and by those who apply them.

Needless to say, consumers have benefited materially because of the creation and application of special finishes for textiles. Parenthetically speaking, manufacturers and retailers have also benefited greatly because the application of these special finishes has increased the range of usefulness of textiles and therefore has resulted in marked increase of sales.

However, there is much more to this problem than just making sales.

If the textile industry is to retain the good will of consumers, it behooves the industry to engage first in research which will disclose whether the finish is capable of producing the effects or of offering the protection for which it has been expressly created. Secondly, the application of each finish should be restricted to the type of textile fiber to which it imparts a substantial affect. Thirdly, the finish should be subjected to biological tests to make certain it will not prove injurious under conditions of use. In this connection it is well to remember that salts of arsenic, mercury and lead are likely to prove harmful. Fourthly, the permanence of the finishes under conditions incidental to use should be studied and that degree of permanence should be clearly set forth on labels or tags affixed to the merchandise. If the finish deteriorates with time or is removed by washing or dry-cleaning, the label or tag should carry that information. If ironing affects the value of the finish that should be disclosed.

Many Misnomers

Regardless of the kind or quality of finish, the terminology used to describe it should be simple and factual. The term "proof" applied to materials treated to resist

(*Continued on Page 52*)

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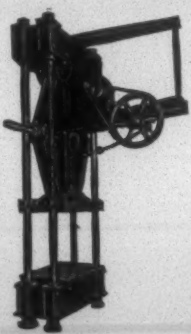

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Evaluation of Special Finishes for Textiles

(Continued from Page 49)

moth damage is, to say the least, an exaggeration of the truth. The term "repellant" to describe a material treated to resist the passage of water is a misnomer. Bats, racquets, or clubs are used to repel oncoming balls. Shower curtains, raincoats, umbrellas and glider covers do not repel water. If properly treated, they resist the passage of water. An article may be fire retardant because it does not encourage the spread of flames or sparks, but that retardant property does not necessarily make it "fireproof" because it may itself be consumed by fire.

Just because a finish retards or inhibits the growth of bacteria, it does not warrant the use of the term "antiseptic" without further qualifying descriptive terminology because the term "antiseptic" when used alone implies the ability to kill off all germ life. The term "deodorize" should not be used to describe a product which masks one odor with another. "Reodorize" is the more accurate word.

The fact that an antiseptic finish inhibits the development of body odors or any other odors on textiles does not mean that it deodorizes. It merely means that it prevents the creation of these body odors.

If consumers are to be favorably disposed toward retailers, and if consumers and retailers are to be favorably disposed toward manufacturers, it would help if these attitudes which I have just enumerated were given increasing weight at the point of manufacture of the finish and also at the finishing plant. Many special finishes for textiles have a definite reason for existing. Their application to textiles can be increased and their usefulness can be broadened with greater effect if the consumer approach to the evaluation of these special finishes begins with the manufacturer.

Presented at a meeting of the American Association of Textile Technologists at the Architectural League, New York, on June 5th.

Stein-Hall Publishes Leaflet On Burlap Tubing

Stein, Hall & Co., Inc., has just issued an illustrated folder describing Hallmark Burlap Tubing as a new, streamlined wrapping technique which saves time, money and material for packing and shipping departments. This product is being used successfully for wrapping textiles, carpets, rugs, cordage, rubber hose, belting, blankets, felt, asbestos, steel wool and other products shipped in rolls, according to the announcement of the company.

Hallmark Burlap Tubing is a spirally sewed burlap in continuous lengths made from standard widths of cloth. Its use is said to eliminate time-consuming measuring and sewing, as it fits easily over the product. The construction permits a two-way stretch so that within reasonable limits the same size can be used for packages of different diameters.

A roll is hung on a portable creel and the operator reels off a length sufficient for the package, allowing margin for ears at either end. The package is inserted in the tubing and then the open end is wire-tied. Next, the cover cover is pulled taut, the other end wired and the tubing cut off without wasting material. The neat package is then ready for shipment.

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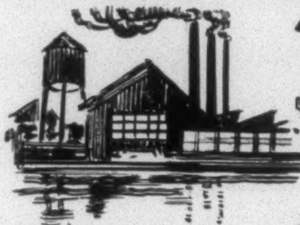

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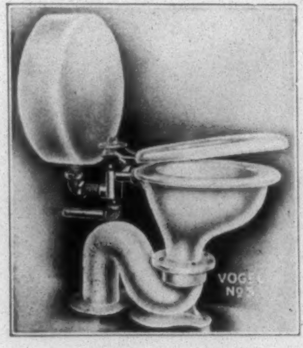

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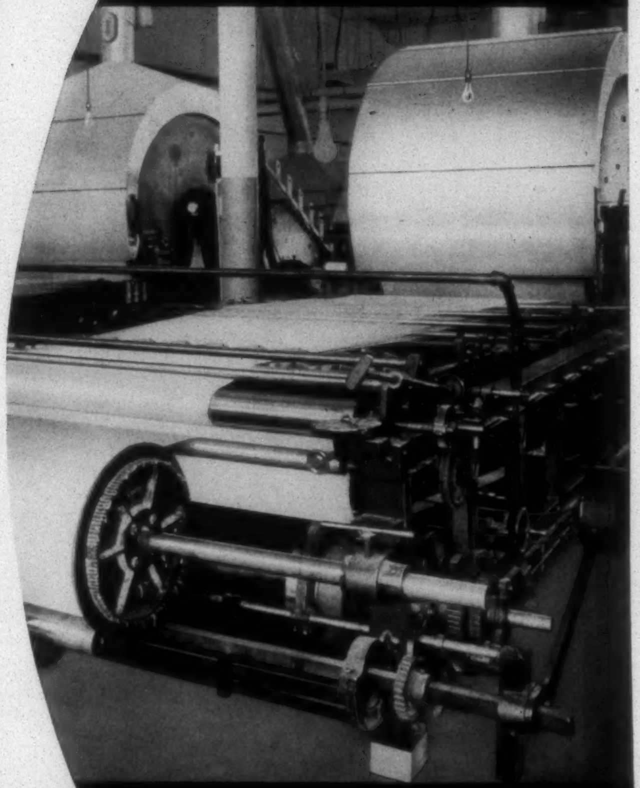

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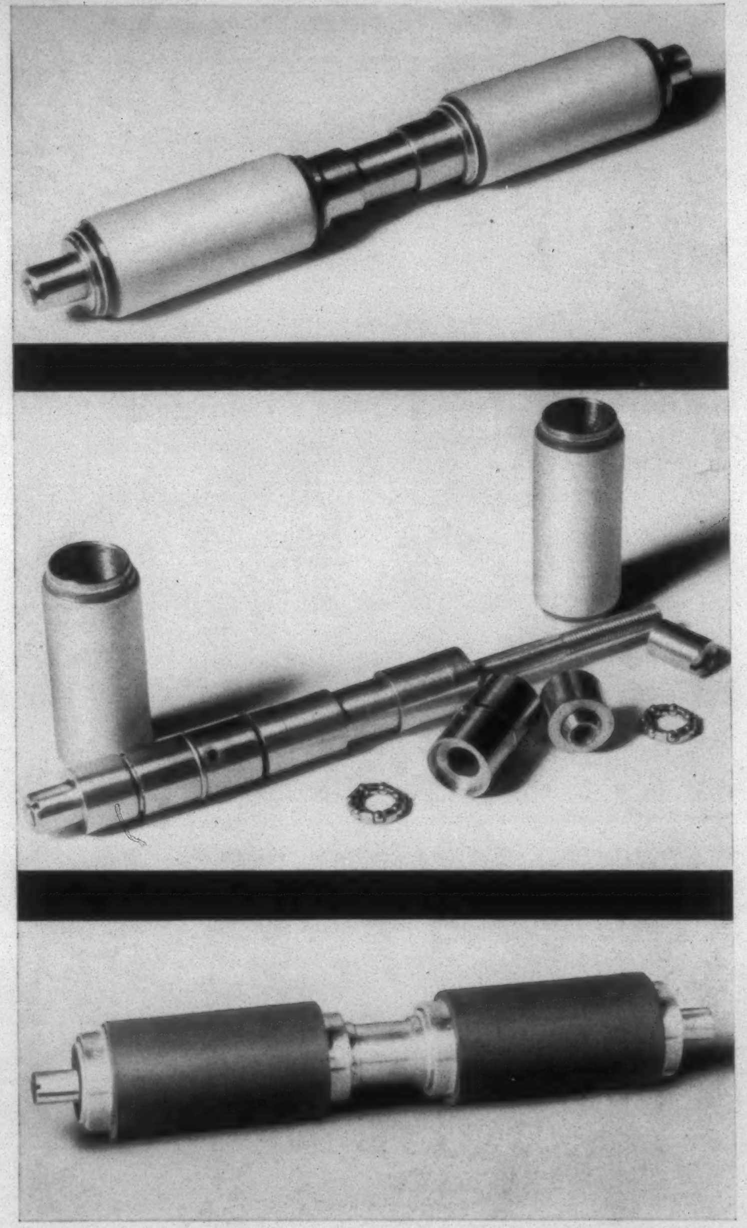

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